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ELECTRICAL WORLD

News Issue

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L. N. McClellan, Who Has Been Appointed Chief Engineer of the Bureau of Reclamation

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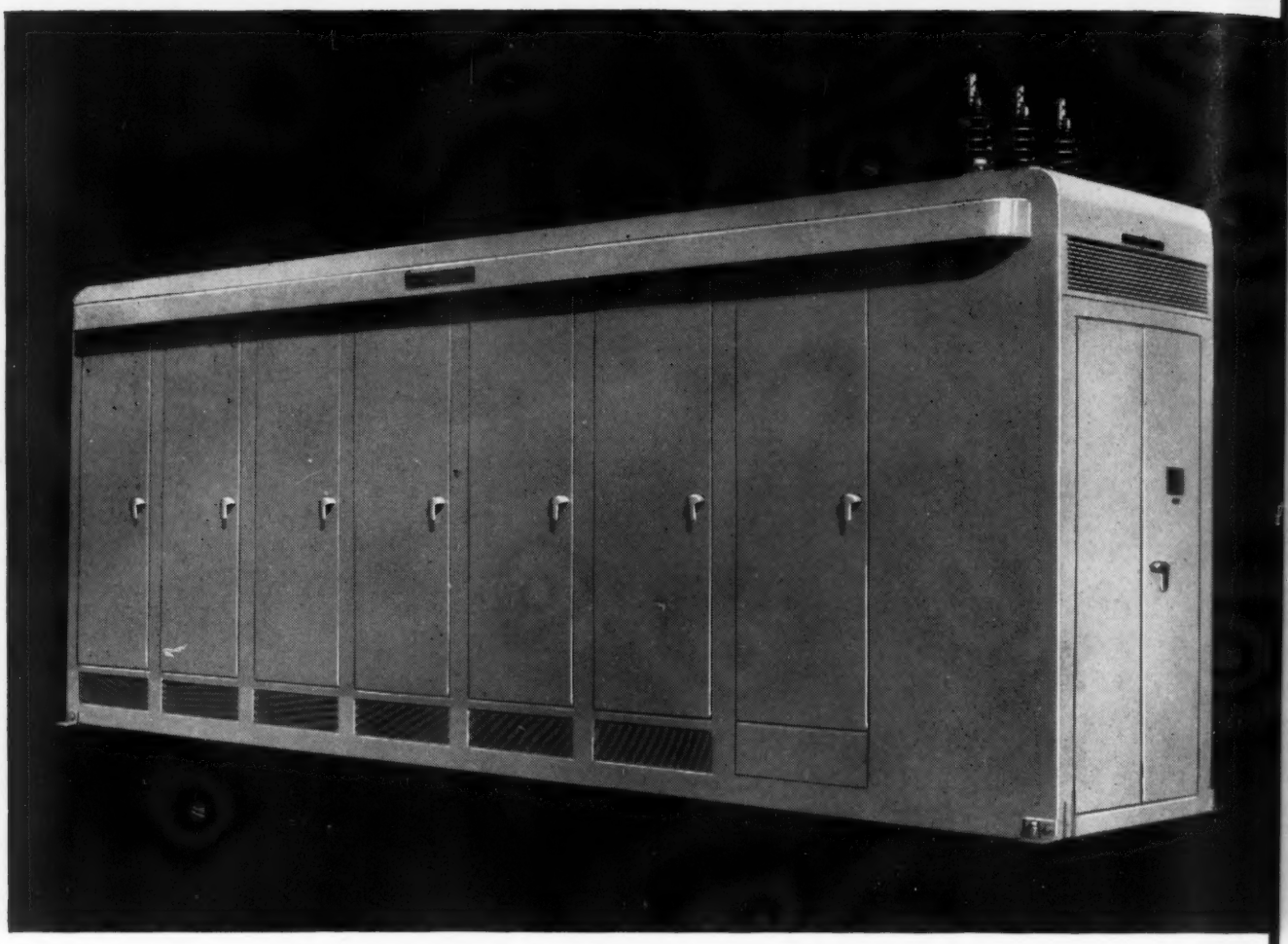

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GENERAL ELECTRIC

Vol. 129 No. 18

NEWS OF THE ELECTRICAL WORLD

The Electrical Week

The top news was out of Washington, this week, and it was enough to make a Republican shudder. As had been predicted early and often concerning the 80th Congress, GOP strategy was to economize in 1947, spend in 1948. Senate action on the Army's Civil Functions bill is the latest proof. The Upper House added $102,000,000 to a bill which was of record proportions when passed by the House, carrying $606,000,000. Almost half the total is for projects involving power . . . The joint committee studying the Taft-Hartley Act has at least five problems to consider in hearings late this month . . . And the problem of resolving the conflicting claims of politics and the public interest still dogged the Senate in the form of the AEC renominations.

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"Everybody in New England except Boston" would be interested in natural gas as a boiler fuel if it were available, one operating man believes. The preliminary figures indicate gas would compete evenly with $10.50 coal.

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Election-year politics figured in the on-again, off-again House Appropriations Committee move to separate Reclamation Bureau money from other Interior Department funds. Idea was to delay action on the Bureau's annual appropriations pending investigation of the agency's bookkeeping and other practices. Top GOP leadership killed this plan because a separate Reclamation money bill would have been target for Eastern congressmen. Result: Little money for Reclamation and a revival of last year's western revolt against GOP economizing.

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Observers report a feeling among electrical wholesalers that, with the break-even point as high as it is, they're going after volume first and worry about profits later.

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IBEW doesn't like the plan for settling jurisdictional disputes in the construction industry. The union feels it helps Taft-Hartley, and that it enforces ancient rulings against IBEW. But it is committed as long as it remains in the AFL Building Trades Dept. Plan starts May 1.

Southwestern Power Administration will get some funds from Congress this year, despite a strong move in Congress to kill the Interior agency. Moral: never underestimate the power of a Texas democrat.

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Labor experts are advising utilities and other major industries to stockpile coal as rapidly as possible. They predict the miners will go out again soon, certainly by July 1 when their present contract expires.

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Interior Department is pushing plans to divert Columbia River water to California. Several congressmen, already sold, seek funds for studies. Objective: To augment California's water; more hydro power and irrigation. Interior would tap the Columbia downstream from Bonneville dam, build canals and tunnels to the headwaters of the Sacramento River.

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Signs-of-the-Time Dept: One executive recently ok'd a $56,000 work order, most of whose cost was represented by materials. For the first time in years, he says, all the material it required was available in the company's stock room, none of it dependent on new shipments.

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One of New York's major financial institutions recently polled its officers on "Which form of tax relief is needed more urgently?" The answers: Personal, 84; Corporate, 7; Both, 2; Neither, 1.

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One shareholder of a Midwestern system returned a proxy with a request that it not be voted in favor of any candidate for director who holds less than 1,000 shares. There's one stockholder who's not fully aware of all the philosophy behind the Holding Company Act.

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As if it did not have enough troubles already, FPC will get in the middle of another nasty battle when it opens hearings May 17 in Fresno on development of California's Kings River. Pacific Gas & Electric Co, an irrigation district and a private citizen have asked FPC to license conflicting projects. But the Army Engineers and Interior Department, who will take part in the hearings, also want to develop the stream.

Economy Loses as Senate Votes Engineers Most Money in History

PROPELLED BY THE enthusiasm of election-conscious legislators the largest Army civil functions appropriation bill in history rolled through the Senate this week. A dogged but badly outnumbered economy bloc of senators was flattened—temporarily, at least—by the steamroller.

The bill, consisting chiefly of funds for flood control and rivers and harbors work of the Corps of Engineers, already had assumed record proportions when passed by the House in February with a total of $606,558,000. The Senate appropriations Committee this week (Apr 26) reported the measure with additions netting $102,027,000. Practically all the increase was for development work by the Engineers.

Hydro Projects Involved

Nearly half of actual construction funds for the Engineers' programs was earmarked by the Senate committee for projects involving hydroelectric power production. This was a consequence of the committee's allocation of large sums to major multiple-purpose projects rather than to more numerous small works.

The committee's open-handed action was taken over the protest of its chairman, Sen Styles Bridges. He and two other committeemen, Senators Reed and Ferguson, filed a minority report on the bill, demanding that the bill's $708,586,000 total be reduced by "not less than $200,000,000." The minority group put this proposal in the form of an amendment on the Senate floor. When this failed, they proposed that all projects except those recommended in the President's budget be eliminated, a step which would have made a reduction of about the same amount.

Bridges Fights for Economy

Failing in these attempts, Bridges was expected to carry his economy fight into the Senate-House conference on the bill. As chairman of the Senate committee, he might influence Senate conferees to seek no increases over the House-approved total for the final version of the bill.

The Bridges-Reed-Ferguson report blasted the committee increases as "inimical to the interest of the national economy" and "an unwarranted and unnecessary drain" on the Treasury in the face of current foreign aid and national defense commitments. They specifically criticized the fact that much of the total increase resulted from large boosts for "a few large projects." They also noted that "a few hydroelectric power projects account for over 40%" of the appropriations for construction.

Of the total of $640,000,000 granted by the committee for flood control and rivers and harbors work, nearly $472,000,000 was earmarked for actual construction. Major allotments for projects with hydro power features granted by the committee, as compared with totals approved by the House, follow:

Project	House	Senate
Jim Woodruff Dam, Fla.	$2,000,000	$5,000,000
Buford Dam, Ga.	0	1,000,000
McNary Dam, Ore.-Wash.	20,000,000	27,000,000
Blakely Mtn. Dam, Ark.	3,200,000	3,200,000
Bull Shoals Dam, Ark.	14,000,000	14,000,000
Narrows Dam, Ark.	2,800,000	2,800,000
Folsom Dam, Calif.	1,000,000	1,000,000
Pine Flat Dam, Calif.	3,500,000	3,500,000
Allatoona Dam, Ga.	8,000,000	9,500,000
Clark Hill Dam, Ga.-S. C.	7,000,000	8,400,000
Wolf Creek Dam, Ken.	12,400,000	17,600,000
Buggs Island Dam, Va.-N. C.	9,000,000	9,000,000
Garrison Dam, N. D.	25,000,000	28,900,000
Eufaula Dam, Okla.	0	1,000,000
Fort Gibson Dam, Okla.	6,500,000	9,000,000
Fort Randall Dam, S. D.	16,000,000	19,000,000
Oahe Dam, S. D.	1,200,000	3,000,000
Center Hill Dam, Tenn.-Ken.	9,000,000	9,000,000
Whitney Dam, Tex.	4,000,000	4,000,000
Philpott Dam, Va.	1,700,000	2,200,000

The majority of the Senate committee noted in its report on the bill that it had allowed no funds for any unauthorized projects. Funds had been requested for 15 such developments, it was reported. The requests were turned over to the "proper legislative committee."

Arizona Utility Appeals for Power Curtailment

Central Arizona Light & Power Co has appealed to its customers to curtail their use of electricity for air conditioning, irrigation pumping, and sign and outdoor lighting. The utility has acted of its own volition as the power-short state has no law for coping with the emergency.

The action was made necessary because of a shortage of capacity to cope with the peak summer load. Curtailment will be emphasized until a 30,000-kw generator is installed in July.

The utility now has a capacity of 44,000 kw in its own steam plant. From Parker Dam, Central Arizona gets the output of 30,000 kw, and from the Salt River Valley Water Users Association, it gets the output of 12,000 kw additional. This 86,000-kw total is not enough to meet the daytime peak loads which are expected to reach 116,000 kw in June.

Air conditioning restrictions extend to offices and stores in the Phoenix area. They may be extended to 45,000 homes. Stores have been asked to halt cooling operations completely on Saturdays and to restrict air conditioning to 85 degrees on weekdays.

If the curtailment is extended to homes, five districts will be set up. Residents of each will be asked to forego air conditioning one day a week in turn. This would have the effect of reducing residential consumption one fifth.

Irrigation well operators have been asked to shut down pumps from 9 AM

GOV. FIELDING WRIGHT of Mississippi locking a cask to be thrown in the Mississippi River near the juncture of his state with Louisiana and Arkansas. In cask was scroll signed by the governors of the three states and the presidents of the four utilities sponsoring the Middle South Development Program. The scroll pledged cooperation in the program. At left of Governor Wright is Attorney General Fred S. LeBlanc, representing Gov J. H. David of Louisiana; at right, Gov Ben Laney of Arkansas

HUNGRY HORSE DAM construction contract for $43,431,000, second largest in Bureau of Reclamation history, is signed by Interior Secretary Julius A. Krug. Seated at his right is Sen James E. Murray of Montana. At Krug's left is Sen Zales M. Ecton of Montana. Members of Congress from Reclamation states are in surrounding group of honor guests.

to 9 PM on one designated day a week.

Industrial users have been asked to shift all heavy uses of power from day to night. In line with the request, the Reynolds Metals Co, largest industrial user of power in the valley, made an agreement with the union representing its employees readjusting the working schedule. The plant will close Mondays instead of Saturdays. This will reduce a weekday load.

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Seattle to Replace Dam at Gorge Plant on Skagit

Construction is expected to begin this year on a new concrete dam for the City of Seattle, at City Light's Gorge powerhouse on the Skagit River. The new structure will replace an existing wood-crib diversion dam. Completion is scheduled for 1950.

Plans also are being prepared for the installation of 60,000 kw of additional generating equipment at the Gorge powerhouse, to which the new dam will deliver water through an existing tunnel. Completion of this installation, which is badly needed, also is scheduled for 1950.

Coming later will be the construction of a powerhouse at Ross Dam and the installation of additional generators in the Diablo powerhouse. Full ultimate development of the river's waterpower resources will make available 865,000 hp of electrical energy at a 45% load factor.

Hungry Horse Contract Awarded by J. A. Krug

The contract for construction of Hungry Horse Dam has been awarded by Secretary of Interior Julius A. Krug. The $43,431,000 contract, second largest in Reclamation history, was given to the General Construction Co, Seattle; the Shea Co, Alhambra, Calif; and the Morrison-Knudsen Co, Boise, Ida. Only the contract for Hoover Dam exceeded this one in amount of money.

The dam will be built on the South Fork of the Flathead River, about 25 miles from Kalispell, Mont. Hungry Horse will be 520 ft high, the fifth highest in the world. It will be the fourth largest concrete dam in the world. Its 2,900,000 cu yd of concrete will be exceeded in volume only by Reclamation's Grand Coulee, Shasta, and Hoover Dams. Of the concrete arch type, the dam will be 2,100 ft long. A concrete-lined ring-gate controlled spillway of the "glory-hole" type will be on the right abutment.

The power plant at the toe of the dam will house four 75,000-kva generators, each driven by a 105,000-hp turbine. The first generator is expected to go into operation late in 1952. Full generating capacity is not expected until 1954.

In addition to the power which Hungry Horse will generate, it will provide upstream regulation of the river. This will mean that 700,000 kw of secondary power to be generated at dams downstream, either in operation or planned, will become firm power.

The downstream plants which will benefit include Grand Coulee, Bonneville, Kerr, Rock Island, and those plants now planned, such as Foster Creek and McNary. The reservoir at Hungry Horse will provide storage for 3,500,000 acre-ft of water.

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Westinghouse and A-C Announce 5% Price Cuts

Westinghouse Electric Corp and Allis-Chalmers Mfg Co have announced reductions in prices of approximately 5%.

Westinghouse products affected are large circuit breakers, outdoor substations, switchgear, lightning arresters, feeder voltage regulators, distribution transformers, single-phase watthour meters, and electrical relays.

A-C products affected are feeder voltage regulators, switchgear, and distribution transformers.

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Utility Loses Tax Case

In a test case to determine whether a utility must pay the St. Louis County library tax, the Union Electric Co of Missouri has been ordered to pay the tax. A Circuit Court judge ordered the utility to pay $20,818, including $16,398 tax for 1946.

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British Pile at Harwell Operating Since August

(McGraw-Hill World News)

The graphite low energy pile—or "gleep"—at the British Government's atomic research establishment at Harwell started operations last August according to an official disclosure by the Ministry of Supply.

The secrecy surrounding certain operations at the research center was lifted when the Ministry made public an address made to the Atomic Scientists Association by Dr H. W. B. Skinner, deputy director at Harwell.

Skinner also revealed that a single cooling mechanism had since been put into action and the power had been taken up to the rated figure of 100 kw and beyond for short periods. This pile was built for experimental work in physics and on materials. Its flux was small for the manufacture of tracers—even so the pile would produce five to 10 curies a month of radiophosphorus of low specific activity.

In the next pile to be installed at Harwell (it is hoped in 1948), the power of operation would be about several thousand kilowatts. This is because the cooling of the uranium would be accomplished by passing a highspeed stream of air in the channels round the rods.

The metal would be sheathed with aluminum to prevent oxidation and to contain the fission products. The emergent gas temperature would, however, be too low for the efficient production of electric power. It was hoped, however, to make some use of the pile's heat for warming buildings.

This pile would operate at a neutron-flux of something like 100 times that of the "gleep," thus making possible the full production of nearly all the radioactive tracers required for this country. A few useful isotopes would be limited in quantity and a few others only manufacturable by the use of a cyclotron. The pile would also provide a powerful source of fission products, distributed among the 35 elements from zinc to gadolinium, and a small quantity of plutonium for experimental work.

Plant to Be 160,000 Kw

Expansion of a steam electric generating plant at Dunkirk, N. Y., to a two-unit station of 160,000-kw capacity, has been announced by the Niagara Hudson Power Corp. The first 80,000-kw unit is now under construction. It is to go into operation in 1950. The second unit is to be ready a few months later.

Marshall Plan Electric Power Requirements

National Program

Country	Area Square Miles (1,000's)	Population (1,000's)	Proposed Additions to Generating Capacity 1948 to 1951 (or later) (1,000 kw) Thermal	Hydro	Total
Austria	32.3	6,534	165	1,370	1,535
Belgium	11.7	8,092	736	12	748
Denmark	16.5	3,550	308	None	308
France	212.5	41,928	810	1,390	2,200
Greece	50.0	6,500	276	9	285
Ireland	31.8	4,229	57	50	107
Italy	119.7	41,176	300	2,200	2,500
Luxembourg	1.0	300	32	None	32
Netherlands	13.2	8,000	260	None	260
Norway	124.9	2,809	None	600	600
Portugal	35.5	6,660	59	210	269
Sweden	173.0	6,141	50	500	550
Switzerland	15.9	4,066	95	310	405
Turkey	294.5	13,650	190	36	226
United Kingdom	88.1	45,890	6,438	None	6,438
Western Germany					
Bi-Zone (British and U. S.)	112.0	38,200	4,665	180	4,845
French Zone	.8	6,200	39	None	39
Saar	.7	800	98	None	98
Total Western Germany	113.5	45,200	4,802	180	4,982
TOTAL NATIONAL PROGRAM	1,374.6	244,833	14,578	6,867	21,445

International Program

Austria, Switzerland, Italy	———	———	———	349	349
France	———	———	———	120	120
Germany	———	———	340	———	340
Italy	———	———	75	1,422	1,497
TOTAL INTERNATIONAL PROGRAM	———	———	415	1,891	2,306
TOTAL NATIONAL AND INTERNATIONAL PROGRAMS	1,374.6	244,833	14,993	8,758	23,751

International Program—Project Detail

Name of Plant (B—Brown Coal) (G—Geothermic) (H—Hydro)	Country in which Situated	Country to Be Served	Installed Capacity (thousand kw)	Annual Production (Millions Kwhr) Total	% Use Factor	6 Winter Months	% Use Factor	Period for Construction (years)	Cost (Million $)	$ Cost (per kw)
1. Adige Noce (H)	Italy	Italy	140	552	45	150	24	4	22	157
2. Bouthier (H)	Italy	Italy	972	771	9	518	12	4	46	47
3. Fessenheim (H)	France	France	120	850	81	350	67	4	67	560
4. Goldenberg (B)	Germany	France, Benelux*	190	1,150	69	—	—	2	18	95
5. Larderello (G)	Italy	Italy	75	500	76	250	76	5	6	80
6. Piave (H)	Italy	Italy	130	275	24	150	26	5	16	123
7. Saca Molveno (H)	Italy	Italy	180	500	32	300	38	4	30	166
8. Upper Inn (H)	Austria, Switzerland, Italy	Italy, Austria	349	1,047	34	412	27	4–6	80	229
9. Weisweiler (B)	Germany	France, Benelux*	150	1,000	76	—	—	3	30	200
TOTAL			2,306	6,645	33				(1) 315	136

(1) $200 million to be obtained from United States to cover the cost of equipment and material. National program will cost nations themselves $5 billion, U. S. has been asked for $300 million to cover contingencies in materials and small equipment.
* Belgium, Netherlands, Luxembourg.

Kennecott Copper Corp to Build Refinery in Utah

Kennecott Copper Corp has announced plans for construction of Utah's first copper refinery. The plant is to have an initial capacity of 12,000 tons of refined copper monthly. It will be erected adjacent to operations at Garfield, Utah. Company officials said exact cost of the project would not be known until plans are drawn.

The new refinery will take copper through the final step in its preparation for use by the electrolytic process.

At present, ore dug from the company's open pit mine at Bingham, Utah, is milled at nearby Magna and Arthur with the ore concentrate going to the American Smelting & Refining Co smelter at Garfield, which produces blister copper.

Blister copper has to be shipped to AS&R electrolytic refineries at Baltimore, Perth Amboy, N. J., and Tacoma, Wash.

The new refinery will be Kennecott's first in the United States and except for the AS&R plant at Tacoma the only copper refinery in the West.

ARTHUR E. SILVER, Ebasco Services, Inc, receives the best wishes of Edgar V. Sayles, extreme right, Consumers Power Co, upon his retirement from the EEI-NEMA Joint Committee on Standards for Distribution Transformers. The committee presented Silver with a model of a home workshop and a sum of money to equip one of his own. The luncheon was held, Apr 23, in New York

Taft-Hartley-Act 'Watch Dogs' Will Have 5 Problems for Consideration

AT LEAST FIVE problems arising out of the Taft-Hartley labor law will get consideration when the Senate-House "watch-dog" committee, headed by Sen Joseph H. Ball of Minnesota, begins its first hearings near the end of May.

It is not surprising that John L. Lewis is smack in the middle of three of them —union welfare funds, "national emergency" strikes, and evasions of closed shop ban. The other two are bogging down of cases before the National Labor Relations Board and evasions of the non-Communist affidavit requirement from union officials.

Ezra Van Horn, operators' trustee of the United Mine Workers' welfare fund, has filed suit in the District Court in Washington seeking to enjoin the payment of pensions to miners employed by operators who did not sign the bituminous agreement and who do not contribute the 10-cent-a-ton royalty to the fund.

This would seem to violate the Taft-Hartley requirement that an employer may not contribute to such a fund unless it is for the exclusive benefit of his employees and their families. But the Ball committee is also concerned by any agreement which would limit pensions to union members only. This appears to violate the principle laid down by the U. S. Supreme Court in recent years, that as "exclusive bargaining" agent a union must represent all employees in the bargaining group in equal fashion. An employer who gave a wage increase only to union members would likely be hailed before NLRB for an unfair labor practice.

Sources close to the joint committee are particularly distressed by the fact that a pension plan for union members only gives Lewis a stronger union shop than he could get under the Taft-Hartley Act if he complied by filing a non-Communist affidavit, which he won't do. Here's why:

All miners will join the union in order to qualify for a pension. But Lewis can take a miner's pension away from him by expelling him from the union, although he cannot get him fired. Under a Taft-Hartley union shop, a worker loses none of the benefits of the contract if he is expelled from the union, although he can be fired if he does not pay his dues.

How to settle disputes when the 80-day injunction expires—and Lewis is a particular problem on this score—is the toughest nut for the committee to crack. Only idea that's come up so far is compulsory arbitration.

Energy Not Age Counts

Age of generating units doesn't mean a thing anymore, not if they can still produce energy. Southwestern Gas & Electric Co has just installed a 1912 GE, 6,250-kw, 200-psi turbo-generator in its Karnack Plant. A 1915 Westinghouse, 10,000-kw unit of the same pressure will be in operation shortly. The plant is a leased ordnance plant at Karnack, Tex.

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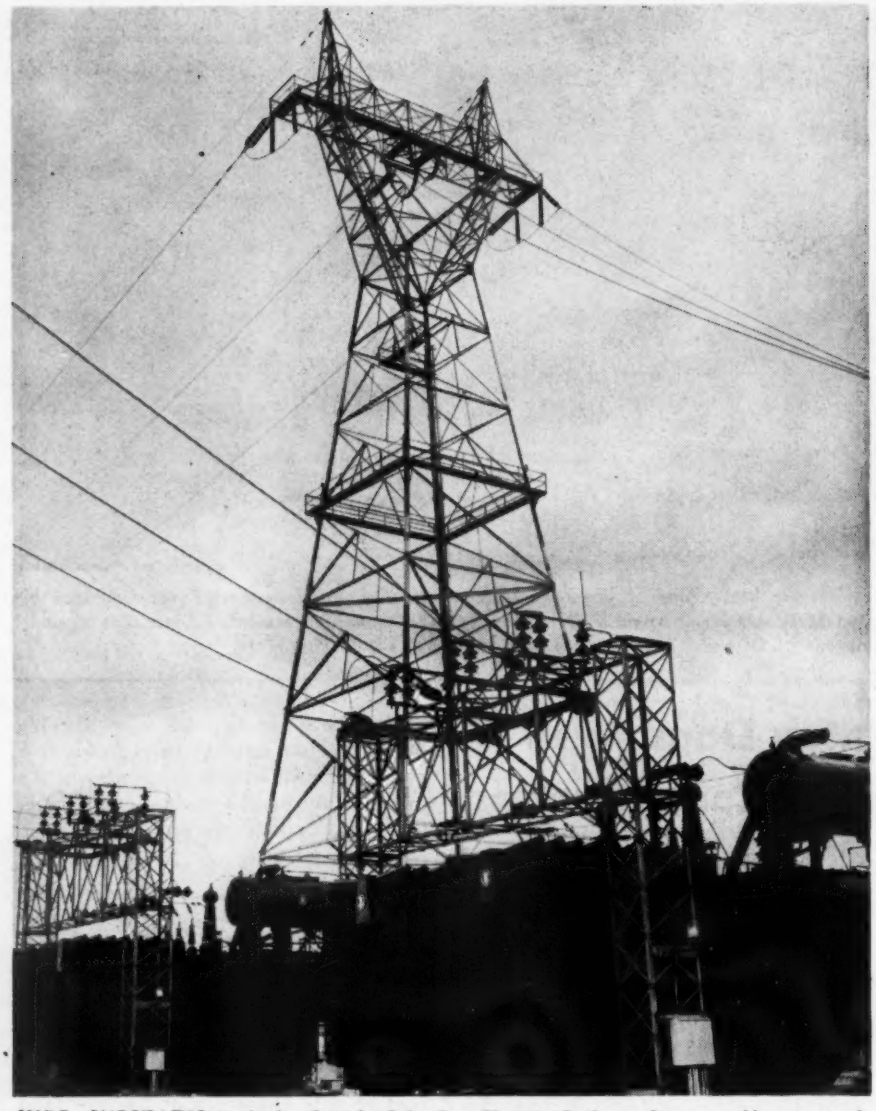
House Heating Cheaper With Electric Room Units

Electrical house heating by individual room heaters is less expensive than by central furnaces. This is the report of rate engineers of the Portland General Electric Co, after a series of tests on house heating installations on lines of the company in the Pacific Northwest.

Results of the tests, made by W. L. Sharp and A. E. Opdenweyer, were reported recently to the Portland section, American Institute of Electrical Engineers.

The average annual use of energy for houses under the test was 1,293 kwhr per cu ft of building for small room heaters and 1,616 kwhr for central furnaces. Houses using room heaters varied from 1,777 to 1,109 kwhr per cu ft. Those using central furnaces varied from 2,087 to 1,278 kwhr per cu ft.

While there is some loss of heat from hot air ducts in central furnace heating, the engineers reported that the chief factor in lower energy consumption by room heaters is that customers using them tend to maintain comfortable temperatures only in rooms in use. With central furnaces, the tendency is to maintain a uniform temperature throughout the house.



KIDD SUBSTATION of the British Columbia Electric Railway Co, near Vancouver, is Canadian terminal for 65-mile, 230-kv line from Bonneville Power Administration's Arlington substation. Station facilitates movement of power between two countries

Northwest Interconnected with B.C. Electric Railway

Interconnection of the vast British Columbia power resources with the Northwest Power Pool has been accomplished. The interconnection was completed last month with the formal opening of the $1,000,000 Kidd substation of the British Columbia Electric Railway Co near Vancouver.

The new substation is connected by a 230-kv transmission line with the Arlington substation of the Bonneville Power Administration, 65 miles below the international border.

The Canadian intertie has been in partial use for the last eight months. It helped to avert severe winter shortages and possibly blackouts such as those that occurred in eastern Canada.

Kidd substation also serves as a terminal link in the 30-mi, 60-kv power ring of the BC Electric around the Vancouver area.

The station is equipped with two main 33,333-kva, 3-winding English Electric Co, transformers. They are connected with 230-kv circuit by motor-operated disconnecting switches.

Important link in the job was construction of power lines to the American border, a half-mile east of Blaine, Wash., which involved unusual engineering problems. The line crosses three rivers, with steel towers as high as 236 ft, and with distances between towers up to 2,100 ft.

Importance of the intertie to the Northwest pool is increased by the approaching completion of the Bridge River project of the Canadian utility. The first 60,000-hp unit is to go into operation in October. Two other units of the same size are to follow in 1949 and 1950.

The Bridge River power supply will be doubly important to the Pacific Northwest. Runoffs north of the border differ radically in time from those south of the border. This condition will provide surpluses of power for use in the United States.

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Carrying Northwest Load Difficult or Impossible

There is only a 75% probability of meeting average load requirements and no probability of meeting peak load demands in the Pacific Northwest under estimated conditions next winter. E. N. Peterson of the Northwest Power Pool so informed members of the Engineering and Operating Section of the Northwest Electric Light & Power Association at a conference recently in Spokane.

Brownouts may become a reality in the area unless plans are made to combat expected power shortages next winter, he warned.

Curtailment of some service may be averted by changing times that consumers require power and will be alleviated in proportion to the amount of water power and fuel oil available during the peak load season. Power companies need 4,000,000 bbl of oils during the year but apparently will receive only about 30% of this amount, Peterson said.

J. E. E. Royer, vice-president of the Washington Water Power Co, took a more optimistic view of the situation. Because of the present water outlook, it appears that companies will have less trouble in meeting demands than they did last year. He admitted he could not predict what the situation might be in November.

Private companies have launched their first major construction moves in 15 years in an effort to combat power shortages, Royer said. Several companies are putting added generating capacity into present plants. Others are working on new installations.

New units planned include the Ariel project on the Lewis River by the Pacific Power & Light Co, Portland, and the Idaho Power Co plant on the Snake River. Montana Power Co is adding to the capacity of its Kerr Dam unit while Washington Water Power is raising the head at Long Lake and increasing storage in Priest and Kootenai lakes.

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Easley, S. C., Buys Mill System

The electric distribution system of the Glenwood Cotton Mills, Easley, S. C., has been purchased by the City Water and Light Department. The city will add 206 customers now served by the mill plant.

President's Reappointment of AEC Leaves GOP Senators Floundering

THE NATION'S atomic energy development program hung in the balance this week as the Senate leadership splintered over President Truman's reappointment of the five Atomic Energy commissioners.

But both Republican and Democratic Senate leaders indicated awareness of the dangers of a prolonged confirmation battle over the AEC posts. Thus, it seemed unlikely that Republicans would simply freeze the appointments until after the coming election, much as they would like to. The effects of such inaction—leaving the atom program without real leadership for nearly a year—seemed too awesome a responsibility.

Compromises Not Favored

Neither of the two "compromises" already suggested, however, is likely to be adopted. These are: (1) the Taft plan, to pigeon-hole the appointments until adjournment, with the President then giving iterim appointments to the present commissioners, (2) a proposal to confirm all the appointees for a year or thereabouts. Both would have the effect of permitting a new Republican president, if one is elected, to name his own AEC board next year.

On the other hand, both are subject to the same criticism. They make the fate of the present commissioners so uncertain as to risk their ability to negotiate contracts, hire competent personnel, or carry on advanced planning. It is by no means certain, either, the commissioners would consent to carrying on under such circumstances.

Adjournment of Congress a Factor

The Taft plan also is based upon the premise that Congress will adjourn before the AEC terms expire in August. The President cannot make interim appointments for vacancies occurring while Congress is in session. And some Congressional groups feel strongly that the session will continue through August, with members returning to Washington after the party conventions.

The one-year appointment plan, reportedly backed by Sen Bourke Hickenlooper, chairman of the Joint Atomic Energy Committee, would require amendment of the Atomic Energy Act. The Act now provides for staggered terms of one to five years per commissioner, starting this August. Chances of amendatory legislation passing both houses of Congress, much less of beating a Presidential veto, before August seem dim.

More likely is a compromise, possibly forthcoming from such GOP supporters of the AEC as Senators Vandenberg and Millikin, or even confirmation of the reappointments as recommended by the White House. That is the judgment of seasoned observers who feel the Republicans cannot risk the onus for upsetting the atom program in an election year.

Even the Vandenberg-Millikin group, however, was annoyed by the timing and terms of the reappointments made by the president last week (Apr 20).

Sources close to these leaders criticize especially the award of the longest (5-year) term to Chairman David Lilienthal. They described him as the "most controversial" member of AEC.

Other commissioners were named for the following terms: Sumner T. Pike, four years; Lewis L. Strauss, three years; William W. Waymack, two years, and Robert F. Bacher, one year.

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North American Co Will Stay in Public Utility Field

The North American Co will remain in the public utility field.

This announcement was made by President Herbert C. Freeman at the annual meeting of the holding company, Apr 26. In January, 1942, North American had filed a plan with SEC under which it would have withdrawn from the public utility field and entered other businesses.

The nucleus for the new NA setup will be the Union Electric Co of Missouri. Other subsidiaries will be the Kansas Power & Light Co, Missouri Power & Light Co, and West Kentucky Coal Co.

Rocky Mt League Holds Panel on Public Relations

That "the art and science of getting along with the public" is becoming increasingly important to and is receiving greater attention from electric utilities was indicated last week at a panel discussion on public relations.

The panel was a feature of the spring conference of the Rocky Mountain Electrical League, April 22-23, at Santa Fe. The board of experts was made up of a number of presidents and vice-presidents of utilities represented in the League.

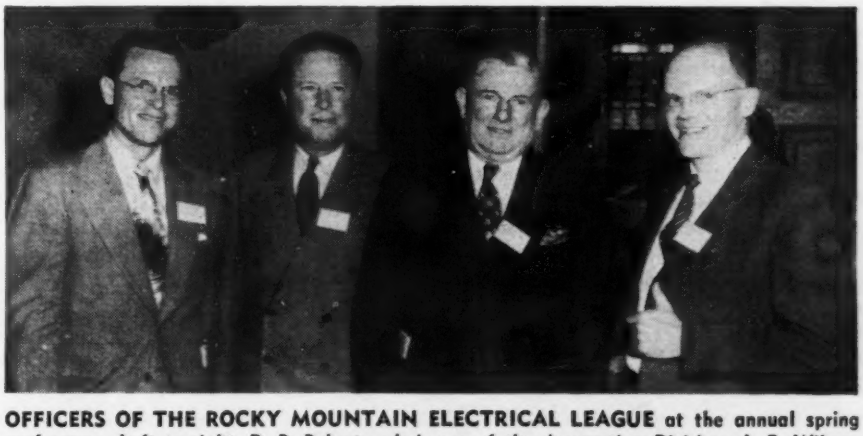
Need for a change in attitude on the part of utilities was discussed. A proposal was made that public relations should be a positive program. That is a program where the utility accepts and aggressively discharges its civic responsibilities as one of the leading industries of the community.

In the session of the Engineering Division, J. F. Emery, Idaho Power Co, indicated that a cutover of a distribution system from 7,200 v to 12,456 v had proved satisfactory. He foresaw the extensive use of both 12.5-kv and 25-kv distribution systems.

A paper on power circuit breaker applications emphasized interrupting capacity and special problems in the area because of high altitudes. Authors were H. F. Gidlund, Public Service Co of Colorado; and F. C. O'Kelly, General Electric Co.

The Accounting Division was told by Neil Simpson, Black Hills Power & Light Co, that a year's experience with simplified rates had shown them to be a definite asset in public relations.

The importance of selecting personnel with careful attention to capacity for future growth, as well as need of an accurate job specification for satisfying immediate job requirements, was stressed by R. H. Joyce, Public Service Co of Colorado.



OFFICERS OF THE ROCKY MOUNTAIN ELECTRICAL LEAGUE at the annual spring conference. Left to right, D. P. Roberts, chairman of the Accounting Division; J. E. Wilson, chairman of the Engineering Division; President J. A. Bullock; Manager R. B. Hubbard

FPC Authorizes Texas Systems to Interconnect

Drought-ridden Texas electric utility systems have been authorized by the Federal Power Commission to establish a series of permanent interconnections for emergency use.

The systems affected include those of Texas Electric Service Co, West Texas Utilities Co, Texas Power & Light Co, Dallas Power & Light Co, Community Public Service Co, Southwestern Electric Service Co, Southwestern Gas & Electric Co, the Southwestern Power Administration, and Lower Colorado River Authority.

15 Interconnections Approved

Squeezed by sharply mounting system loads, slow deliveries of new equipment, and insufficient rainfall, Texas Electric, TP&L, Dallas Power, Community Public Service, and Southwestern Electric sought FPC aid early in April. The Commission then approved 15 specific interties and extended authorizations for several it had previously approved for the area. All the interties affected may be used until Mar 31, 1949 on an emergency basis.

Additional interconnections authorized follow:

Texas Electric with West Texas Utilities near the towns of Eskota, McCamey, Sterling City, Cisco, Brownwood, Holliday and Munday.

Texas Electric with Southwestern Public Service at Denver City.

TP&L with Southwestern Gas & Electric near Overton, Edgewood and Swan.

TP&L with Southwestern Power Administration at the Payne Substation, near Denison.

TP&L with lower Colorado River Authority near Minerva, Round Rock, and Lampasas.

Present Permit Extended

FPC also extended its Aug 19, 1947, authorization of the intertie between Texas Electric and Southwestern Public Service in the Lamesa-Andrews area. It already had approved until March, 1949, the interconnection at Southwestern Public Service Co's Quanah Switching Station with the West Texas system.

TP&L's authorization for war-time interconnections with Southwestern Gas & Electric, SPA, and LCRA expired Mar 15, 1946.

In addition to drought conditions and equipment shortages, the applicant companies reported to FPC that the breakdown of one of Dallas Power & Light's large generators on Mar 15 had seriously affected the area's power supply. The unit cannot be repaired for nearly three months, it was estimated.

SEC RULINGS

Rochester Gas & Electric Corp has been authorized to issue, from time to time, 2¾% unsecured notes in an amount not to exceed $16,000,000. The notes will mature not more than nine months after issuance and the proceeds will be used for construction. Rochester Gas also received permission to solicit authorization from its preferred stockholders to issue or renew unsecured notes, debentures or other unsecured indebtedness in the amount of $20,125,000, representing a $12,500,000 increase over that now issuable under the company's charter. In addition, the parent company was authorized to make cash capital contributions of not more than $300,000 to Rochester Gas for a period of three years and six months from July 29, 1947. The amount will not exceed the sum of the dividends received by the parent on the Rochester common stock from and after June 30, 1947. (Release No. 8104).

Oklahoma Gas & Electric Co's public sale of 65,000 shares of 5¼% cumulative preferred stock, $100 par, has been exempted from competitive bidding. Harriman Ripley & Co has purchased the stock at par to reoffer it to the public at 104. (Release No. 8114).

Mississippi Power Co, subsidiary of the Commonwealth & Southern Corp, has received permission to sell $1,000,000 of first mortgage bonds, due 1978, bearing interest at 3⅛%, to institutional investors at 99½% of the principal amount. Proceeds would be used for construction. (Release No. 8144).

Carolina Power & Light Co has been permitted to borrow $7,000,000 from the Equitable Life Assurance Society of the United States. Carolina Power proposes to use the proceeds to pay off bank loans and finance construction. The notes will bear interest at the rate of 3¼% per annum and will mature in the principal amount of $437,500 on each April 15 from 1952 to 1957, both inclusive; the remaining $4,375,000 principal amount being due on April 15, 1958. (Release No. 8128).

United Light & Railways Co's common stock dividend, payable in shares of common stock of the American Light & Traction Co, has been pronounced "appropriate" under the terms of the Holding Company Act, SEC has ruled. The dividend would be payable at the rate of one share of American Light common for each 50 shares of Railways common to stockholders of record of March 25, 1948. (Release No. 8135).

Dallas Power & Light Co, a subsidiary of Texas Utilities Co, has been authorized to offer to its stockholders 68,250 additional shares of common stock at $60 per share and to sell publicly $4,000,000 of 25-year sinking fund debentures, due 1973. (Release No. 8106).

Commission Granted Funds

The Saskatchewan Power Commission has been granted $2,400,000 by the legislature to provide for the acquisition, purchase, and construction of power plants. The money is to be used to lay out and construct a provincial grid.

MEETINGS

PREVIOUSLY LISTED

Edison Electric Institute—Engineering Committees, Edgewater Beach Hotel, Chicago, May 3-5; Annual Convention, Hotel Traymore, Atlantic City, June 1-3.

National Electrical Wholesalers Association—Annual Convention, Hotel Statler, Buffalo, May 3-7.

Missouri Valley Electric Association—Rural Round Table, President Hotel, Kansas City, May 5; Sales and Rural Conference, President Hotel, Kansas City, May 6-7.

Southeastern Electric Exchange—Spring Conference, Engineering and Operating Section, Tampa Terrace Hotel, Tampa, Fla., May 6-7.

Pennsylvania Electric Association—Communications Committee, Hotel Traylor, Allentown, May 6-7; Systems Operations Committee, Castleton Hotel, New Castle, May 13-14; Transmission & Distribution Committee, Irem Temple Country Club, Dallas, Pa., May 20-21; Prime Movers Committee, Hotel Casey, Scranton, June 10-11.

Northwest Electric Light & Power Association—Annual Business Meeting, Empress Hotel, Victoria, B. C., May 10; Business Development Section, Empress Hotel, Victoria, B. C., May 10-12; Accounting and Business Practice Section, Davenport Hotel, Spokane, May 17-18; Personnel Section and Safety Conference, Medford Hotel, Medford, Ore., June 9-11.

Engineers Club of Philadelphia—Engineering Progress Show, co-sponsored by junior members and the Franklin Institute at the Institute, May 11-16.

Electrical Manufacturer's Representatives Association of Michigan—Industrial Electrical Exhibit, Convention Hall, 4484 Cass Ave., Detroit, May 12-14.

New Jersey Utilities Association—Spring Meeting, Seaview Country Club, Seaview, N. J., May 14.

Interstate Power Club of New York—May Meeting, Hotel Martinique, New York, May 17.

American Public Power Association—Annual Convention, Broadmoor Hotel, Colorado Springs, Colo., May 17-19.

Public Utilities Advertising Association—Annual Meeting, Hotel Cleveland, Cleveland, Ohio, May 27-28.

American Society of Refrigerating Engineers—Spring Meeting, New Ocean House, Swampscott, Mass., May 31-June 2.

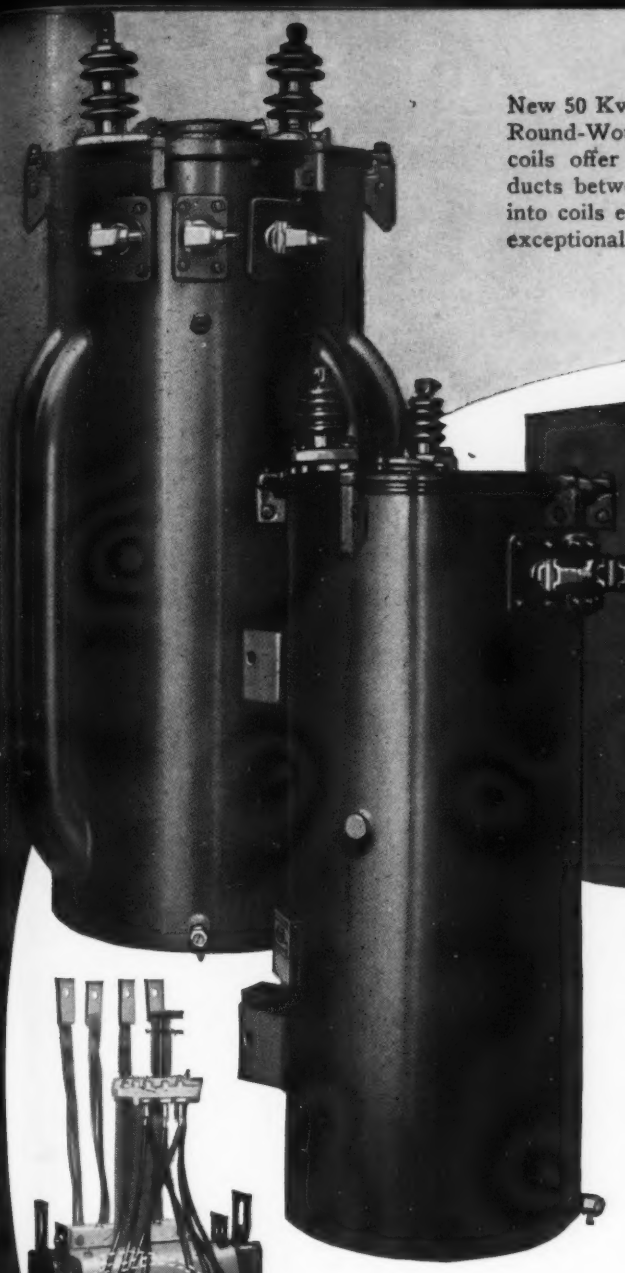
Arkansas Utilities Association—Annual Convention, Arlington Hotel, Hot Springs, Ark., June 14-15.

Pacific Coast Electrical Association—Annual Meeting, Fairmont Hotel, San Francisco, June 16-18.

Canadian Electrical Association—Annual Convention, Manoir Richelieu, Murray Bay, Province of Quebec, June 16-19.

American Society for Testing Materials—Annual Meeting, Book-Cadillac Hotel, Detroit, June 21-25.

American Institute of Electrical Engineers—Summer General Meeting, Palace of Fine Arts, Mexico City, Mex., June 21-25.



New 50 Kva (left, back) and 37½ Kva Round-Wound transformers. Round coils offer more cooling surface; oil ducts between core and coil and built into coils eliminate hot spots and give exceptional short time overload capacity before excessive temperatures are reached. White dotted line in core-coil assembly (lower left) indicates shape of the wound silicon-steel strip core which reduces weight and improves performance characteristics.

ROUND COILS WOUND CORE

L-M ROUND-WOUND CONSTRUCTION MAKES 37½ and 50 KVA TRANSFORMERS

33⅓% lighter—

with improved short-time overload characteristics

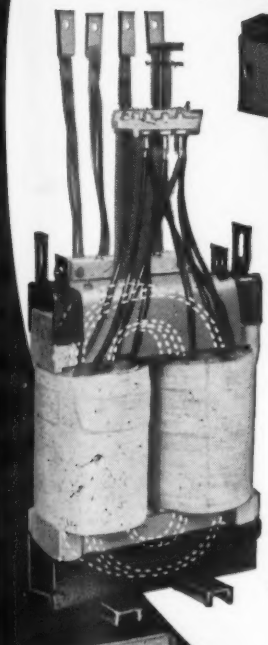
L-M's famous Round-Wound construction is now available in 37½ and 50 Kva sizes. These new sizes have round coils wound directly onto the wound core. They offer all these advantages:

Weight reduced 33⅓% — with improved short time overload characteristics because of better cooling.

Balanced Performance — lower exciting current, better ratio of losses, improved regulation, lower impedance.

Longer service life through higher average impulse strength, and greater short circuit strength inherent in the round cross section coil.

New round tanks with all the latest L-M improvements in weather-resistant paint, moisture-tight covers and bushings, and L-M accessories.



Write for this Bulletin

Illustrates details of Round-Wound construction, describes L-M research and test facilities, and features and performance of L-M Distribution Transformers. Write Transformer Division, Line Material Company, Zanesville, Ohio.

L-M Round-Wound Transformers are made in 1½ to 50 Kva, in all distribution class voltages including 14,400 volts, and meet EEI and NEMA standards.

LINE MATERIAL TRANSFORMERS

LM

L-M DISTRIBUTION EQUIPMENT INCLUDES: **Distribution Transformers • Fuse Cutouts and Fuse Links • Lightning Arresters • Oil Switches • Pole Line Hardware • Line Construction Specialties • Underground Equipment • Fibre Conduit • Street and Airport Lighting Equipment • Wired Radio Control Equipment • Capacitors**

Business In The Next War . .

Ed. Note: Following is a special report from McGraw-Hill's Washington staff. It analyzes what another war would be like for business and labor, and the prospects for business of a long-term "cold-war" economy such as we have now.

WORLD WAR III would be a lot worse than World War II was.

Last time, we could afford to reward people for doing what had to be done. This time—if it comes—incentives will not be possible. This time, logic would leave no substitute for naked compulsion. That goes for everyone.

(This is not to predict that this country is going to war. Today, real war is only a remote possibility.)

One total, continent-wide weapon is what the nation would have to become. Make no mistake about that. Around the Pentagon, you can hear talk of a 30-hour war, a limited war, a war you can stockpile for. But nobody really believes it. That talk is the old military dream. Ever since the industrial revolution, the professionals have been trying to recapture war from the factory managers. They've never suceeded yet.

It's a safe bet that War III, like every modern war, would come to this: the only limit on its consumption of stuff is what the nation's industry can pour out. So planning assumes an initial stage—Russia crippled by atom attacks but spread over all Europe—a pause while the Soviets organize Europe's industry and we mobilize a war economy based on resources of the Americas—finally, total inter-continental warfare. This would take years.

War Machine Was Easier To Build

. The chart shows why it would be tougher to mobilize our economy today than it was to build a war machine on 1939's base. Actually, there was more for consumers, at the war's peak, than they had been accustomed to in peacetime. This frosting on the living standard was used to lure people into doing what had to be done. But if industry had to mobilize today, output could be increased only a little. It would quickly come up against inflexible limits. Look at steel, for example:

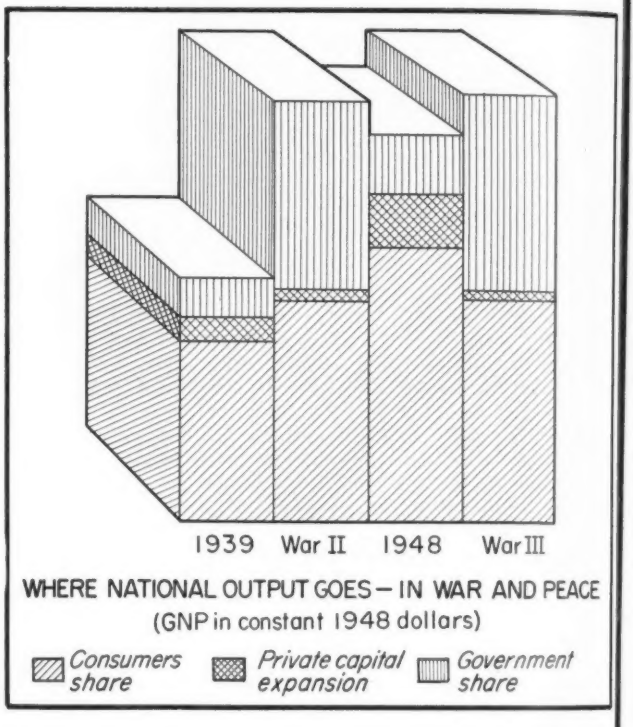
	1939	War II	Today
	(in millions of ingot tons)		
Capacity	81.8	93.8	90.5
Output	52.8	89.6	84.5

So to get out the munitions that we did before, it would mean a sharp drop in what's left for civilians.

And with the carrot gone, nothing is left but the goad.

War II's Controlled Materials Plan had the rudiments of where we would have to start next time. CMP's approach: You can control all production if you dictate the flow of a few key materials.

But in War III, you would have to apply CMP to more than just metal-using industries. You'd have to add other crucial materials to complete Government's management of what gets made.



Manpower regulation would be the over-riding problem of any War III now. We couldn't fight another war without dictating to everyone where he works, what he does, what he gets paid for it.

Reason 1: Supply of manpower would be a limit on production—and materials—right from the start. We never really had to be tough about this in War II. In 1939, we had 9,000,000 jobless, plus shorter hours.

	1939	War II	Today
	(in millions)		
Armed Force	0.4	11.4	1.2
Labor Force	54.1	52.6	59.8
Employment	45.2	51.8	57.1
Hours per week	37.7	45.2	40.0

Reason 2: The need for mobility of labor. When you convert industry from peace to war, you have to move a lot of people. If many are jobless, that's easy. If you can draw people to new jobs with higher wages, that's easy too. But you couldn't do that again; the chart shows living standards will go down—not up.

The problem: To control people as you do materials. After all, you have no worry about the morale of a steel ingot; it never gets mad.

So you can see features of a labor control pattern:

First, national service would have to be tied in with the draft. More than offering a choice of "work or fight,"

If War Comes

Government would decide who works, who fights. Decision would be on individual usefulness, not on number of children. So, the decision couldn't be by a board of your neighbors; it would have to be by experts—bureaucrats.

Another thing we'd have to do, that was not done in War II, is flatly to outlaw strikes, treat incitement to strike as treason.

How could you get even grudging cooperation in all this from organized labor? Labor leaders would have to be assured in more than mere words that this was no plot to end free labor in America. Obviously, cooperation could be obtained only by giving union leaders a responsibility and authority in Government never before approached in this country. Britain did that last time.

Civil rights would take an awful beating. In a war with Russia, we'd have a real fifth column. That means that, as with strikes, all sorts of innocent activities would become suspect.

Prices Would Be Fantastic

Inflation Dangers would dictate war management to an extent they never did in War II. Today you have an inflationary situation even before you mobilize. Mobilization itself would increase the money people have. But this time, there would be fewer goods to be bought, not more. So price pressures would be fantastic.

No fighting nation can afford to let prices change very fast. Rapid price changes hamper production. And mere price ceilings could never do the job if we went to war under today's conditions.

When you try to hold down too great a pressure with ceilings, the pressure leaks out into uncontrollable and wasteful black markets. Also, ceilings themselves distort production. Thus you would have to chop directly into income—profits and pay. That's why you couldn't use premium wages, even to lure workers into war industries, or use premium profits to stimulate production.

You'd tax at rates no one ever thought of seriously before. You would have to force savings. How high would taxes have to go? Well, federal take from taxes and war bonds would have to be about two-and-one-half times what it is now. All these are drastic measures. But the question is: Could even the most extreme combination of these do the job?

	1939	War II	Today
	(in billions of dollars)		
National income	72.	182.	215.
Federal taxes	5.	44.	46.
New war bond sales	0.	13.	1.

Hardly, in a long war. Sooner or later, you'd have to operate under what amounts to military communism. It's the nature of modern war that the nation must be reshaped into one huge factory. You can do it with discipline or with rewards.

All the candy has been passed out now. This time there would be nothing left but the whip.

There's a theory around that Stalin is holding his fire until the U. S. has a depression, thinking we'd be weaker then. If that's true, he's crazy. It would be easy to mobilize from a depression. As you have seen, nothing could be more painful than mobilizing today's prosperous economy.

More probable than real mobilization for a real war is more of the pressures the economy is under today. That means: greater U. S. armament, more goods given away, more arms shipped to other nations. This fiscal year we're spending about $17-billion on this sort of thing. Next year, $22-billion, or more.

These demands work their own hardships on a booming economy. Their continuance creates cumulative strains that inevitably increase centralized control over industry. The decontrol of business after War II already is being reversed. Freight car builders come to Washington for scheduling help. Oil people submit steel requirements to Washington. Steel executives are summoned to justify price increases.

How far will all this go? How soon?

Political Logic Tops Economic Logic

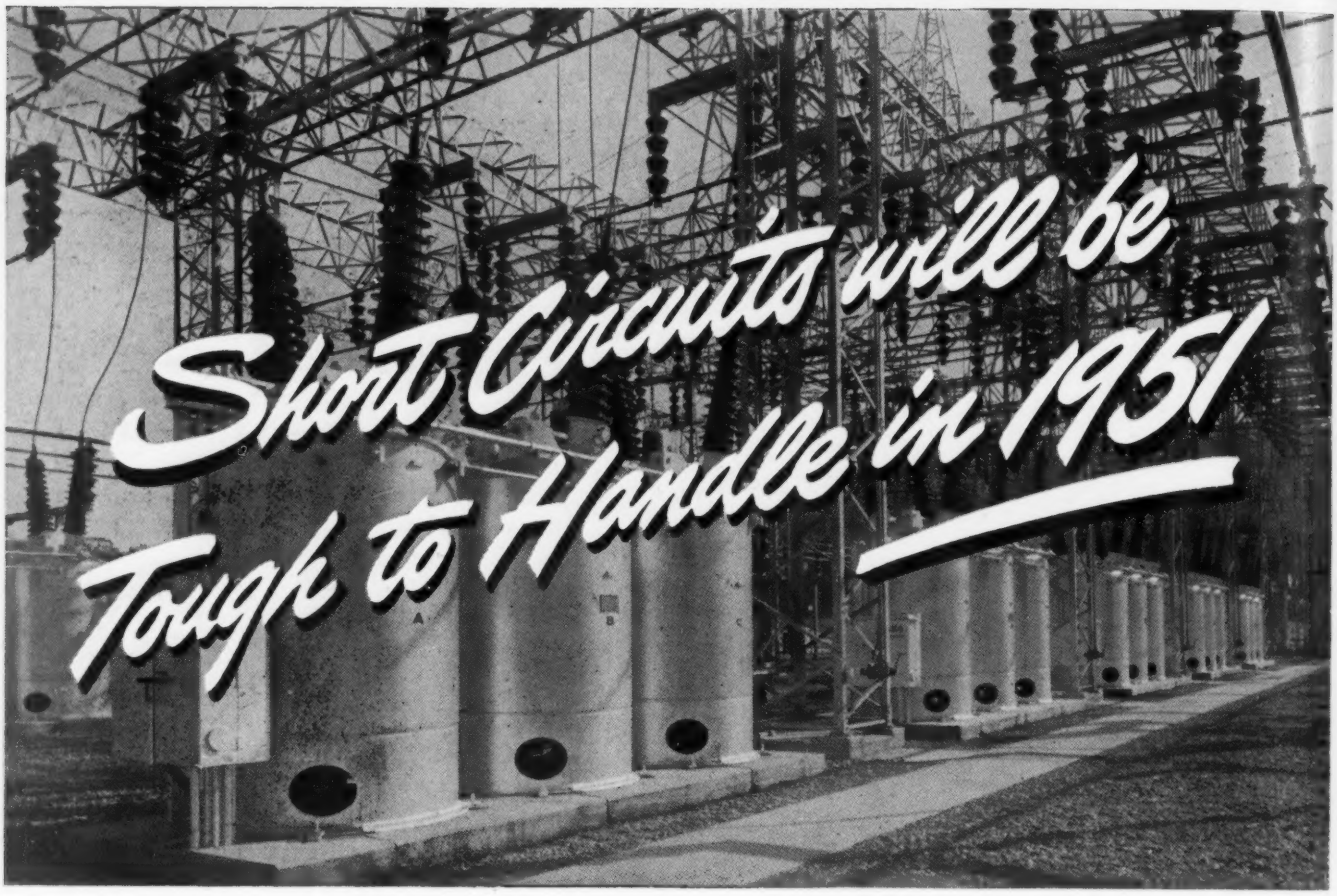
Long after economic logic indicates that the economy would profit by this control or that, political logic will prefer to hold it back—even though someone does get hurt a little. This sort of see-saw is going on today. For now, with Truman holding down the lid on munitions money, no physical controls are needed to insure production for the military.

However, suppose diplomatic warfare should call for another stack of chips. Then, almost certainly, there would have to be some simple controls: priority for military orders; and, if you wanted to salve the pain to civilian production, some limitation on non-essentials.

Such controls would get production. But they wouldn't reach the real difficulty—their inflationary effects. Truman already is troubled by this trend. Last week he asked Congress again for authority to fix prices and wages. By next year, chances are even a Republican president will ask about the same things. Unless the "cold war" abates, he'll get them sooner or later.

Today's appropriations will generate next year's price increases. That will bring labor in for a fourth round, and the squeeze on fixed incomes will clamp tighter. The public then may well be clamoring for controls.

Once the Government embarks on price controls, it starts a chain reaction. Prices, after all, are the regulators of production. When some of them are frozen, they can't do their job. And that leaves it up to Government to do the regulating.

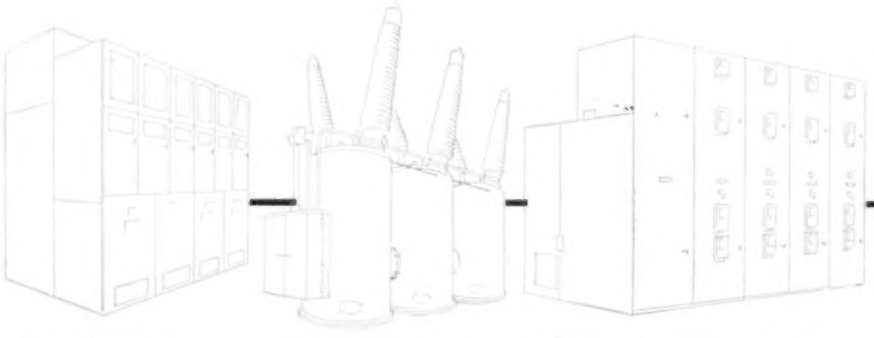


Will your breakers keep pace with expanding generating capacity?

Here's an important memo for central stations. As you plan expansion of system facilities to meet today's growing demand for electrical power, *don't overlook the vital matter of system protection.* Your breakers—if adequate for today's peaks—may be dangerously inadequate three years from now when 15,000,000 kw will have been added to American generating systems.

This applies not only to outdoor breakers but to indoor breakers as well . . . wherever power on the system has grown to the point where short-circuit stresses may exceed breaker capacity. For only by keeping breaker capacity in step with system expansion can your investment in generating and transmission facilities be protected.

So, if your generating and distribution problems have tended to overshadow the matter of system protection, look to Westinghouse for help. We can assist you (in some cases) by boosting the interrupting rating of your present breakers . . . or in developing a planned schedule of replacement to meet today's and tomorrow's peaks. Call your Westinghouse representative or write Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-60658



Cubicle Switchgear
Int. Cap. 2,500,000 kva

GM Oil Circuit Breakers
Int. Cap. up to 10,000,000 kva

Heavy-Duty, Metal-Clad Switchgear
Int. Cap. 500,000 kva

Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

POWER CIRCUIT BREAKERS

AEC and REA Granted Funds in Deficiency Bill

Major funds for the Atomic Energy Commission and Rural Electrification Administration were included in the $780,000,000 first Deficiency Appropriation Bill which zipped through the Senate this week. Lesser funds for the Bureau of Reclamation, Army Engineers, and Bonneville Power Administration also were approved.

Some delay is expected in conference with the House, which approved appropriations totaling $338,000,000 in the measure. The Senate increases consisted mainly of items requested by the President after the House passed the bill. Biggest boost was for tax refunds. All funds are for expenditure in the fiscal year ending June 30.

AEC's authorization to contract for a total of $150,000,000 of new construction and equipment was approved as passed by the House. The Senate took a similar course on the $175,000,000 deficiency lending fund for the Rural Electrification Administration.

Significantly, neither the House nor the Senate attached any restrictive strings to the REA funds. Thus, it is expected that the restriction contained in the last regular REA appropriation—requiring advance reports to Congress of requests for generating or transmission loans—will go by the boards. This proviso also has been omitted from the 1949 REA money bill which now is before the Senate Appropriations Committee.

The House approved loan funds totaling $400,000,000 for REA in fiscal 1949. Spokesmen for the agency this week told the Senate committee that they would require additional administrative funds in order to handle this sum.

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Appliance Sales in 1947

Pennsylvania Power & Light Co, which serves eastern and central sections of the state, has reported these appliance sales in its territory in 1947: 89,450 radios, 12,673 ranges, 4,485 water heaters, 7,612 automatic washers, 34,603 washing machines of all types, 3,521 ironing machines, 4,303 home freezers, and 2,387 electric blankets.

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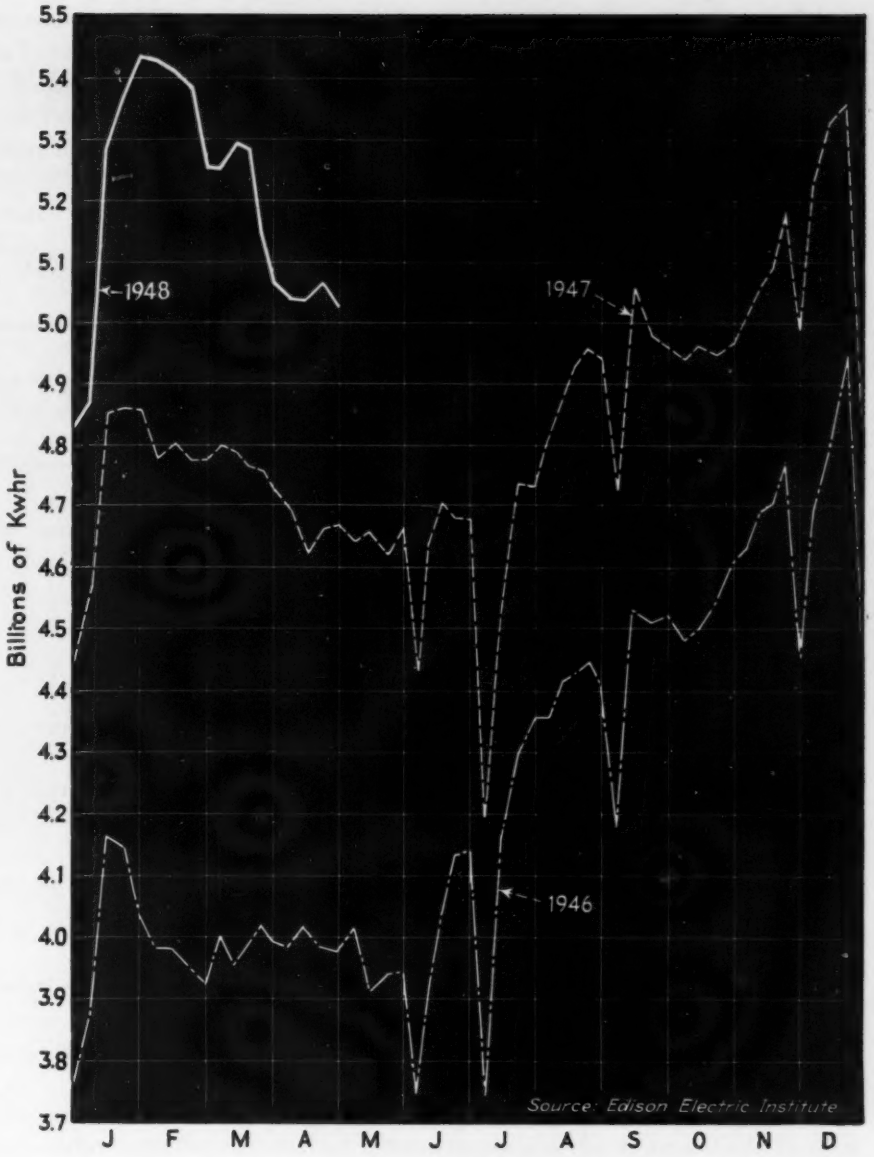
Utility Grants 12½% Raise

South Carolina Electric & Gas Co has granted a 12½% raise to employees represented by the IBEW-AFL. The raise is retroactive to Jan 26.



Missouri's Rocky Rapids Rock Arput

ARPUT staggered in from the Washington-New York sleeper the other day. He was groggy as a Ninth Avenue bar.

"Just in from Washington," he yawned. "Thought I'd take a look at the government's output. Wasn't so good."

Realizing that this made him sound like a GOP Senator, he stumbled along to an explanation.

"This was an FPC hearing," he mumbled. "Seems a bunch of mouthpieces, I mean attorneys, were arguing whether the Missouri River is navigable despite some rapids which no one has ever navigated except on dry land."

This seemed to make it a prima facie case. But not so. ARPUT babbled on wearily.

"Everybody agrees," said ARPUT, "that no boats ever traverse an 18-mile stretch of rapids. But the FPC mouthpiece says they're navigable, all right, even if Lewis and Clark do have trouble getting past them. 'Merely an interruption', this guy says. He claims the law makes it navigable. Any old boat that doesn't agree can just climb out of the river and walk on down, the way the output did last week."

Weekly Output, Millions Kwhr

1948		1947		1946	
Apr. 24	5,027	Apr. 26	4,668	Apr. 27	3,977
Apr. 17	5,087	Apr. 19	4,660	Apr. 20	3,987
Apr. 10	5,033	Apr. 12	4,620	Apr. 13	4,015
Apr. 3	5,037	Apr. 5	4,693	Apr. 6	3,988
Mar. 27	5,065	Mar. 29	4,729	Mar. 30	3,992
Mar. 20	5,145	Mar. 22	4,759	Mar. 23	4,017
Mar. 13	5,285	Mar. 15	4,764	Mar. 16	3,988
Mar. 6	5,293	Mar. 8	4,787	Mar. 9	3,953
Feb. 28	5,252	Mar. 1	4,797	Mar. 2	4,000

Percent Change from Previous Year

	Apr. 24	Apr. 17	Apr. 10
New England	+ 3.4	+ 8.3	+ 8.3
Mid-Atlantic	+ 5.9	+ 9.0	+ 9.0
Central Industrial	+ 6.3	+ 8.4	+ 7.8
West Central	+ 6.8	+ 6.3	+ 5.1
Southern States	+11.7	+12.7	+12.7
Rocky Mountain	+12.7	+12.1	+11.3
Pacific Coast	+ 7.0	+ 6.1	+ 6.6
Total United States	+ 7.7	+ 9.2	+ 8.9

IN THE INDUSTRY

RICHARD N. LARKIN

OUR PAYING CUSTOMERS having expressed interest in GGTHOOMB, we shall resume the reports first undertaken in ELECTRICAL WORLD a few weeks ago. (GGTHOOMB is a non-federal alphabetical galaxy representing the "Government Get The Hell Out of My Business Club.")

A full-time Boswell of GGTHOOMB could do little else than follow and investigate all the leads which flow in. (These come from members and what is irrationally called the press.) We've been unable to investigate so thoroughly. But there's a hatful of stuff on hand. Forthwith then, let the membership qualifications of new brethren be spread on the record.

Perhaps not the largest new member, but certainly the most startling, is the CIO Maritime Committee. It qualified last week. Then, if *The New York Times* is to be believed, it asked government, particularly the military, to keep out of the merchant marine trade. The public interest and national defense, CMC held in a note to Secretary Forrestal, would best be served if all military merchant shipping were to be turned over to private ownership and civilian manning. Even in time of national emergency, CMC said, private control should persist, under government direction. Now a number of CIO unions and many CIO leaders have endorsed public ownership of certain industries, notably power. Thus, the CMC position is surprising and interesting, particularly in view of the statement that nationalization of the merchant marine—held inevitable after complete militarization—would be supported neither by government, management, nor the maritime unions.

Then in Washington, last week, the Federal Communications Commission ended hearings on a ruling it made some time ago. That ruling banned radio "editorials." The secretary is aware that some of the membership may favor this FCC penetration of business, radio programs being what they often are. Still, GGTHOOMB must never forsake principle. The publishing business is not so regulated; therefore the "verbal-publishing" business—radio—should not be. No one is forced to buy a daily paper whose views he can't stand. And no law requires that you tune in a station you don't want to hear. FCC's motive, protecting minority views, also is a federal restriction on initiative, good or bad. As we read history, federal restriction is not the best way to work out advances in any art.

We note a new development in rubber, already a GGTHOOMB member. Signed into law recently was a bill which retains federal ownership. Under it, government continues to produce, to control, and to hold plant. No plant may be sold except on Presidential recommendation.

The new law, though, achieves something toward geting Uncle out of the business. It does carry a termination date—two years hence. And it has a happy policy statement. This looks to termination of government enterprise in rubber. And the law directs an end to the wartime patent-pooling arrangement. This alone will help bring about a "free, competitive synthetic rubber industry."

TECHNICAL TRENDS

ARCHER E. KNOWLTON

Transmission and sub-transmission extensions have been stimulated by the movement of industrial plants and branches into communities of less than 50,000. Since V-J day 46% of new plants above $100,000 have gone there. The trend continues lively in Central, Southeast and Southwest areas. States without personal and corporate income taxes are favored.

Heat removal from flue gases raises thermal efficiency but it also aggravates fan problems. Operation that much nearer to the dew point may cause dust adhesion, unbalance and bearing wear. Result: more maintenance, more boiler outage result.

Smoother load control, particularly on units not loaded for many hours to maximum economy, would keep boilers and most auxiliaries cleaner and more efficient.

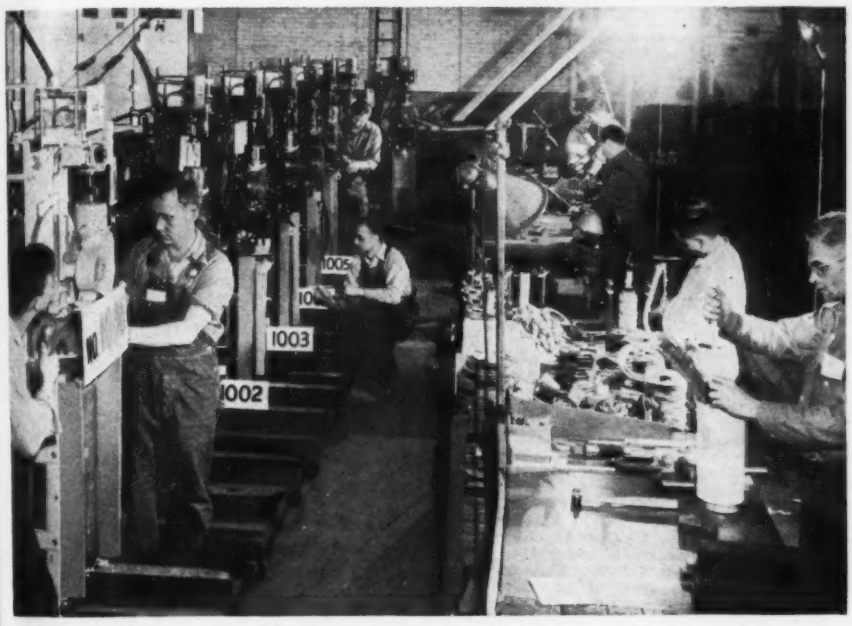
Water tables are lowering steadily, due partly to increased well-draft by communities and industrials. This is a deterrent to both steam plants away from bodies of water and heat-pump cycles geared to derive heat from subsurface water.

River Silt—transported sediment—is a matter of growing concern to power technology. Deposits at points of low velocity (e. g. behind dams) may ultimately ruin the hydro sites ballyhooed into billions of public money. The Colorado takes 0.01 inch per year from its whole drainage area into Lake Mead behind Hoover Dam.

Heat-pump coefficient of performance is not hard to understand. Remember that some $\frac{3}{4}$ of the delivered heat comes from an otherwise useless source (earth, air, pond or ground water) and only $\frac{1}{4}$ from the power system supplying the driving motor.

Service cable of simpler construction, fewer variants, longer life, resistance to seepage, thinner and lighter is receiving special emphasis by committees and some manufacturers.

MANUFACTURERS and MARKETS



NO. 1000 DFR step-type feeder voltage regulator built on the new production line of the Allis-Chalmers Mfg Co at West Allis is followed by five others. Component parts are assembled on adjacent benches for convenience to unit assemblers

New Allis-Chalmers Production Line Speeds Output of Feeder Regulators

Completion of the 1000th single-phase feeder voltage regulator built by Allis-Chalmers Mfg Co since the resumption of operations following the strike has set a record. A new production line, established one year ago, made the record possible. The DFR step-type unit following testing and painting operations, was shipped to the Houston (Tex.) Lighting & Power Co.

The production line was set up specifically to speed the manufacture of this major piece of electrical equipment. Within one year, the 1000th unit rolled off this production line.

During the last 12 months orders which previously would have required more than one year to process have been shipped in less than half that period. Many utilities consequently have received deliveries ahead of schedule. Those in particular distress have received special attention. Many of the power suppliers have shown a preference for the single-phase regulators of ratings up to 15,000 v, rather than wait for the 3-phase units which require a longer delivery schedule.

The story of the unusual production line goes back to 1946, during the middle of the 11-month strike at A-C's West Allis Works. The backlog for regulating equipment had reached a record peak. A-C officials realized that even with the ending of the strike many months would be required to work off the backlog alone. In the meantime, new orders continued to pour in.

To solve this problem, a new assembly line was designed and made ready for the returning production workers. As the men returned to work, difficulties were ironed out. The production rate was stepped up from month to month. The completion of the 1000th regulator on April 2 vouched for the effectiveness of the new line. As the backlog in terms of units mounts higher and higher, commitments are being met with further increases in production.

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New Rockbestos Office

Rockbestos Products Corp, New Haven, has announced that its Chicago office and new warehouse is now located at 1500 S Western Av, Chicago 8, Ill.

Industria Electrica Plant at Mexico City Dedicated

Industria Electrica de Mexico, S. A., recently dedicated its new plant in Mexico City. Ceremonies were presided over by Miguel Aleman, President of Mexico, with the assistance of Alfredo del Mazo, Governor of the State of Mexico, and Antonio Ruiz Galindo, Mexican Secretary of National Economy. George H. Bucher, chairman, and William E. Knox, president of Westinghouse Electric International Co, took part.

The new plant is one of the largest privately-operated industries in Latin America. Established in 1945, it started its initial production early this year, and will eventually produce a wide range of electric appliances and industrial and central station apparatus. The company was formed with the aid of the Mexican government, which subscribed approximately one-third of the $15,500,000 capital, and Mexican and United States private capital, which account for the other $10,000,000.

Production according to American methods and standards is made possible by a 20-year license agreement with Westinghouse, providing for all technical phases of modern plant layout, operation and product design.

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Long-Term Prospects Good, General Cable Reports

Operations of General Cable Corp so far this year have been running at a somewhat lower level than for the comparable 1947 period, D. R. G. Palmer, president, stated at the annual meeting held recently in Perth Amboy, N. J.

He added that some products are at a reduced rate, while others produced by the company have been maintained at the higher 1947 level. Lead-covered cable business has held up in excellent manner, the stockholders were told, and demand is expected to continue for sometime.

Over the long-term, the General Cable Corp sees an increasing demand for electrical energy from expanded public utilities, communications and the industrial and home building industry.

Commenting on reports of government piling of strategic raw materials

and finished goods, Mr Palmer said that as far as he can learn no plan has yet crystallized for contracting either individual items or quantity of wire and cable products.

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Diamond Wire Consolidates Operations in Sycamore

Diamond Wire & Cable Co has announced that, after being in business in Chicago Heights, Ill., for 45 years, it is discontinuing its plants in that city and will consolidate all operations in its plant at Sycamore, Ill. The Sycamore plant is a modern wire mill and will give the company greatly increased production with the facilities installed there.

General offices of the company are also being moved to Sycamore. All operations in Chicago Heights will cease as of May 1. It is expected that the buildings in Chicago Heights will be taken over by some other industries.

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Manufacturers Make New Sales Assignments

Electrical manufacturing companies have recently made the following appointments to their sales staffs:

W. N. Matthews Corp, St. Louis, has appointed Ivor C. McLain sales-engineering representative in Missouri, Kansas and Nebraska, with headquarters at 709 Victor Bldg, Kansas City, Mo. Mr McLain was formerly connected with the Central Illinois Public Service Co, Missouri Public Service Co and with REA. Webster M. Lehmann has been made sales representative in Iowa, with headquarters at 600 Paramount Bldg, Des Moines 9, Iowa. Mr Lehmann flew 67 missions over Germany.

Eastern Power Equipment Co, Columbus, Ohio, has been named engineer and distributor for the new Jensen dual heat infrared convection electric-oven tunnels and conveyors in the Columbus area.

Yarnall-Waring Co, Philadelphia, has appointed Leland C. Campbell southwestern representative, working from the Dallas sales office. Howard R. Wunker has been named sales representative in the company's new Cincinnati office and J. Frank Long, sales representative in the new St. Louis office.

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Votes Change in Name

The name of the American Rolling Mill Co, Middletown, Ohio, was officially changed at the recent stockholders meeting to Armco Steel Corp, Charles R. Hook, president, has announced. Mr Hook stated that the new name more fully reflects the true nature and scope of the company's business.

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Colorado — Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, furnishing, del. f.o.b. cars shipping point or f.o.b. cars Wild's Spur, 5 radial gates with 5 in. diameter rollers, pin bearings and supports, 10 in. wall plates and gate sills, anchor bolts, and pipe sleeves; and five 15,000 lb. motor operated radial-gate hoists, with self-synchronizing transmitter and switchboard for one hoist only for spillway at Olympus Dam, Colorado-Big Thompson Proj., Spec. 2208. W. R. Young, ch. engr.

Ind., Lawrenceburg—Indiana & Michigan Electric Co., J. G. Mooney, exec. vice pres., 220 W. Colfax Ave., South Bend, 135,000 to 185,000 hp. brick, structural steel, rein.-con. steam generating plant along Ohio River, near here. **$20,000,000.** American Gas & Electric Co., 30 Church St., New York, N. Y., consult. engr.

Iowa — Southwestern Power Co-operative, Inc., Creston, sub-stations at Corning, Anita, Greenfield, Hopeville, Lomoni and Creston. Over $100,000. Stanley Eng. Co., Hershey Bldg., Muscatine, engr.

Montana — Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Coram, 7 oil-immersed, forced-oil-cooled outdoor-type transformers, with water-cooled external heat exchanger for Hungry Horse Powerplant, Hungry Horse Proj., Spec. 2202. Plans deposit $1.25. Walker R. Young, Denver, ch. engr.

Neb., Omaha — Omaha Public Power Dist., 17 and Harney Sts., switching station 4 and Jones Sts. **$517,000.** Burns & McDonnell Eng. Co., 107 W. Linwood St., Kansas City, Mo., consult. engr. C. W. Minard, c/o Omaha, owners, ch. engr.

New Mexico—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Socorro, one control and relay board for control house, Socorro Substation, Rio Grande Proj., New Mexico-Texas, Spec. 2207. Plans deposit $1.

N. Y., New York—Western Electric Co., 195 Broadway, Zone 7, bldg. to serve as company headquarters on plot bounded by Ericssen Pl., Varick, Hudson and Laight Sts. Over **$1,000,000.**

North Carolina — Albermarle Electric Membership Corp., Hertford, 162 mi. rural distr. lines, sys. imprvs., incl. 3 mi. new distr. lines and completing previously approved constr. Chowan Co. **$500,000.**

N. D., Grand Forks—Minnkota Power Co-operative, Grand Forks, substation and install switchgear and control panels. Ellerbe & Co., 1st Natl. Bank Bldg., St. Paul, Minn., engrs.

Okla., Enid — Pd. Affairs, Oklahoma City, power plant for Northern Oklahoma Hospital. $250,000. C. L. Monott, 1901 N.W. 19 St., Oklahoma City, archt.

Tennessee—U. S. Eng., 303 U. S. Courthouse, Nashville, Zone 1, one 1,400 hp. hydraulic turbine and governing equip. for station service unit in Center Hill hydroelectric power plant, Caney Fork River, DeKalb Co., Serial No. W-40-058-eng-48-96.

Low Bidders & Contracts Awarded

Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, three 14,000 hp. hydraulic turbines for the Jim Woodruff Dam on Apalachiola River, to Newport News Shipbuilding & Drydock Co., Newport News, Va. **$1,250,000.**

Ind., Rensselaer — Bd. P. Wks., c/o Mayor G. Keller, chn., 2,400 hp. diesel engine and generator for power plant, to Nordberg Mfg. Co., 3073 S. Chase St., Milwaukee, Wis., **$232,300**; switchgear, to General Electric Co., 840 S. Canal St., Chicago, Ill., **$32,200.**

Ky., Lexington—Kentucky Utilities Co., First National Bank Bldg., 8 mi. electric transmission line linking Tyrone Plant with Dix Dam Louisville Line. Owner builds. Over **$75,000.**

Neb., Grand Island — City, light and water plant bldg., to Geer-Mauer Constr. Co., Grand Island. **$235,000.** Bids 4/7.

N. J., Hammonton—Electric Coil Transformer Co., c/o general contractor, 1 story, 50 x 200 ft., brick, cinder block steel mfg. plant, to M. L. Ruberton, 100 Bellevue Ave. **$75,000.** W. D. Faint & Co., 1915 Browning Rd., Pennsauken, engr.

Ohio—U. S. Eng., Madison Ave. and 8 St. W., Huntington, 18, W. Va., Pump Stations 1, 3, 11 and 12, at Portsmouth-New Boston Local Protection Proj., Inv. No. eng-46-022-48-83, to L. B. Strandberg & Son Co., Inc., 608 S. Dearborn St., Chicago 5, Ill. **$635,880.** Bids 3/2, awarded 3/31.

Pa., Seward — Penna. Electric Co., Johnstown, 50x85 ft., 1 story, brick, steel electric plant addn., 3 story, service bldg., 50x115x140 ft. steel, boiler room wing, to Berkible Bros., 625 Swank Bldg., Johnstown. Est. **$500,000.** Gilbert Assoc., Inc., 412 Washington St., Reading, archt.

Tex., Carthage—Texas Gas Transmission Corp., Carthage, booster stations. **$4,000,000.**

Wash., Tacoma—Port of Tacoma, Port of Tacoma Rd., cold storage plant addn., to Construction Engineers & Contractors, 801 Port of Tacoma Rd. **$674,206.** Bids 4/6.

INDUSTRIALS, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Calif., San Francisco — Jewelers Merchandise Mart, c/o J. L. Stewart, archt., 206 Sansome St., San Francisco, 9 story, 137½x275 ft., office bldg., and bsmnt. garage, 350,000 sq. ft. floor space. **$4,000,000.**

Colo., Denver—Owner, c/o T. H. Buell & Co., consult. engrs. and archts., 17 story, office known as Petroleum Bldg., 15 St. and Cheyenne Place. **$2,746,000.**

Md., Baltimore — U. S. Eng., 24 and Maryland Ave., plans by Palmer, Fisher, Williams & Nes, 801 Cathedral St., and James R. Edmunds, Jr., Buckler, Fenhagen, Myer & Ayers, assoc. archts., 300-bed hospital for Veterans Admin., Vermont Ave. between H and I Sts. N. W., Wash. 25, D. C. **$5,000,000.** A. F. Brinckerhoff, 101 Park Ave., New York, N. Y., landscape archt.

Mont., Billings—Sisters of Charity, St. Vincents Hospital, 2 Ave. N. and 31 Sts., plans by J. W. Maloney, Central Bldg., Seattle, Zone 4, Wash., 6 story hospital addn. **$2,000,000.**

N. Y., Buffalo—University of Buffalo, Main St., medical-dental school. **$2,000,000.**

Ore., Salem—State Bd. Control, Salem, 5 story, T-shaped, marble and granite, rein.-con. State Office Bldg. $2,000,000. Plans deposit $50. Whitehouse, Church, Newberry & Roehr, Builders Exchange Bldg., Portland, archts.

S. C., Camden—E. I. duPont deNemours Co., duPont Bldg., Wilmington, Del., plastic plant. **$20,000,000.**

Tex., Pasadena — Phillips Petroleum Co., Bartlesville, Okla., chemical plant, loading docks, etc. **$8,000,000.**

Low Bidders & Contracts Awarded

Utah, Provo—FOUNDRY—Pacific States C. I. Pipe Co., Provo, centrifugal c.i. pipe foundry and addln. office facilities, to F. H. McGraw Co., 58 E. Washington Blvd., Chicago, Ill. Est. approx. **$2,500,000.**

NEWS ABOUT PEOPLE

Three New Vice-Presidents Elected by Union Electric

Three new vice-presidents were named at the recent annual meeting of the Union Electric Co, St. Louis. They are Dudley Sanford, M. E. Skinner and A. H. Schettler.

Mr Sanford, whose previous title was executive assistant, was made vice-president in charge of the electric operations of the company and of Union Colliery Co and St. Louis and Belleville Electric Railway.

Mr Skinner, who has been director of sales, is now vice-president and will continue in charge of commercial operations. Mr Schettler, formerly comptroller, has been named vice-president and comptroller.

D. SANFORD

A graduate of the University of Missouri and Princeton University, Mr Sanford was connected with Utah Power & Light Co for four years before joining the Union Electric organization in 1919 as industrial engineer in the sales department. From 1923 to 1944 he was treasurer of the St. Louis County Gas Co and assistant treasurer of Union Electric. In 1944 he was made executive assistant of the company and its subsidiaries, engaging primarily in matters pertaining to the operation of the system.

M. E. SKINNER

A. H. SCHETTLER

Since 1922 Mr Skinner has served successively as commercial manager of the Duquesne Light Co of Pittsburgh, vice-president and commercial manager of the New York Power & Light Corp, assistant vice-president of Niagara Hudson Power Corp. For ten years, before joining Union Electric in 1946, he was vice-president in charge of sales for the Buffalo Niagara & Eastern Power Corp and its subsidiary operating utilities, serving Buffalo and the surrounding territory.

Mr Schettler spent 16 years with Price-Waterhouse & Co before he became identified with Union Electric in 1940 as comptroller. He is a member of the American Institute of Accountants.

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▶ Raymond J. Palmer has been appointed municipal lighting engineer for system engineering planning division of the Detroit Edison Co. He replaces the late Edward H. Richter. Mr Palmer will supervise the municipal lighting section. He has been identified with the company since 1922.

L. N. McClellan Made Chief Engineer, Reclamation

(See Front Cover)

Announcement has been made of the appointment of L. N. McClellan as chief engineer of the Department of the Interior's Bureau of Reclamation, Denver, Colo. Formerly assistant chief engineer, Mr McClellan succeeds Walker R. Young, who will retire on June 30 upon completion of 37 years of service.

Mr McClellan brings to his new position a lifetime of experience in water resource development. As assistant chief engineer for the past three years, he has been closely associated with Mr Young in directing the design and construction aspects of the broad Reclamation program. In 1911 he began work for the Bureau of Reclamation on Salt River project in Arizona. Except for military service in World War I and less than a year with the Southern California Edison Co, he has served continuously with the Bureau. He is a fellow and past vice-president of the American Institute of Electrical Engineers and past-chairman of the Denver section. He is also a member of the U. S. National Committee of the International Conference on Large Electric High-Tension Systems. He was a United States delegate to the World Power Conference in Paris in 1946.

W. R. YOUNG

Mr Young's Reclamation career began as a young engineer on the construction of Arrowrock Dam in Idaho, then the world's tallest dam. With less than 10 years of Bureau experience, he was assigned the responsibility of find-

ing a site and of preparing designs and estimates preliminary to the construction of Hoover Dam and power plant. He served as construction engineer on the Kittitas Division of the Yakima project, Washington, and supervising engineer on California's Central Valley project. He was appointed assistant chief engineer of the Bureau in 1940 and five years later chief engineer.

In making the announcement, J. A. Krug, Secretary of the Interior, said: "The retirement of 'Brig' Young is a great loss to western resource development. Fortunately he has consented to serve the Bureau as a consultant on engineering matters. He is one of the Nation's outstanding engineers, whose career has been marked by achievements which have contributed a great deal to the advancement of construction, planning and design in the Reclamation field. In Mr McClellan, we are fortunate in having another outstanding engineer with a lifetime background in Reclamation to take over direction of the Bureau's design and construction."

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▶ ELMER L. LINDSETH, president of the Cleveland Electric Illuminating Co, has been elected president of the Cleveland Chamber of Commerce.

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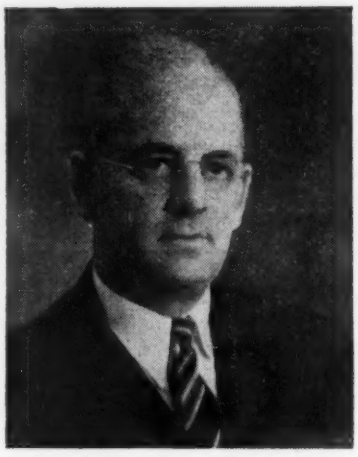
▶ ESTILL I. GREEN has been appointed director of transmission apparatus development, Bell Telephone Laboratories Inc. Mr Green joined the department of development and research of the American Telephone & Telegraph Co in 1921 and went with that department to the Laboratories at the time of the 1934 consolidation.

▶ GARLAND L. JOHNSTON, formerly commercial manager of the Potomac Edison Co at Cumberland, Md., has been appointed district manager of the company's Waynesboro (Md.) district. He succeeds the late Roland E. Long. Edward L. Ewald, who has been assistant to vice-president at the main offices in Hagerstown, has been appointed commercial manager at Cumberland to succeed Mr Johnston.

▶ E. B. NEISWANGER, who has been connected with the Central Power & Light Co, Corpus Christi, Tex., in an executive capacity for 25 years, has retired. Mr Neiswanger is credited with playing a prominent part in organizing the vast distribution system now operated by CP&L. He was vice-president from 1926 to 1929, when he became president, serving in that capacity until 1932. At the time of his retirement he was serving on the board of directors.



E. S. BUNDY

Bundy Made V-P and Chief Engineer, Niagara Hudson

Edwin S. Bundy, a director, vice-president and chief engineer of the Buffalo Niagara Electric Corp, Buffalo, has been elected vice-president and chief engineer of the Niagara Hudson Power Corp, Syracuse.

Mr Bundy has been identified with the Buffalo utility and associated companies for 36 years. Starting as a draftsman a few months after his graduation from Cornell University, he was made superintendent of the Pulaski district of the company in 1915 and from 1921 to 1923 was division superintendent. In 1929 he was appointed chief electrical engineer for the western division companies of the Niagara Hudson System. He has been a vice-president and chief engineer of the Buffalo Niagara Electric Corp since 1944.

He is a fellow of the American Institute of Electrical Engineers and past-chairman of the Niagara Frontier section.

OBITUARY

▶ ROLAND E. LONG, district manager of the Potomac Edison Co at Waynesboro, Md., died on March 10. He was 50 years old. Mr Long had been identified with the Potomac Edison system for 30 years and had been manager at Waynesboro since 1931.

▶ EDWARD N. GREENLEAF, formerly Los Angeles district office manager for the Allis-Chalmers Mfg Co, died on Apr 10 at the age of 73. Mr Greenleaf joined A-C in 1912 as a sales representative in the company's Salt Lake City office. In 1921 he was transferred to the Los Angeles office as manager, a position he held for 14 years. He retired from the company last year.

Edwin A. Barrows

Edwin A. Barrows, 78, president of the Narragansett Electric Lighting Co, Providence, R. I., from 1916 to 1927, died in that city on April 18 after a short illness.

Mr Barrows was born in Providence and was graduated from Brown University in 1891. For 13 years he was active in the banking field in his native city, holding the position of bank examiner from 1902 to 1904. In the latter year he became secretary and treasurer of the Narragansett utility, 12 years later being elected its chief executive.

He was at one time vice-president of the then National Electric Light Assoc. Retiring from the Narragansett company in 1927, Mr Barrows entered the investment banking field. He held a number of directorates, and was long associated with Littlefield & Co, Providence.

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▶ EARL H. KENDALL, materials engineer of Consumers Power Co, Jackson, Mich., died on April 17 after a short illness. Born in 1890 near Peoria, Ill., he has been associated with Consumers Power Co and Commonwealth & Southern Corp since 1920. His earlier engineering activity was in industrial and electric station design, but for the past 15 years he has been principally concerned with overhead line materials and design. Mr Kendall is responsible for many novel designs and inventions and is nationally known in the pole line equipment, overhead line, wire and timber industries. A member of the American Society for Testing Materials Mr Kendall was secretary of the committee on electrical conductors and served on committees on galvanized products, timber and insulators. He was chairman of the Edison Electric Institute line hardware subcommittee of the T&D committee and an active member of the American Wood Preserving Association, National Society of Corrosion Engineers and the American Institute of Electrical Engineers.

▶ JAMES DILLON, president of the Lake Shore Electric Mfg Co, died at his home in Cleveland, Ohio, on April 18. He was 56 years old. Mr Dillon was a well known figure in electrical manufacturing circles in Cleveland for the past 25 years. In addition to being president of the electric control panel manufacturing company at the time of his death, he was also vice-president of the Lake Shore Finance Corp, engaged in industrial financing. During World War II he was president of the Acme Engineering Co, Wooster, Ohio, makers of shells and other war specialities.

NEW EQUIPMENT

Gauss Meter Line

A NEW, THIN-PROBE gauss meter and a triple kit conveniently combining three gauss meters of different ratings in one carrying case have been announced by the Meter and Instrument Divisions of the General Electric Co. The new model, with a probe diameter of 0.052 in., is stated to permit measurement of flux in many small-gap magnets.

The direct-reading meter has a 2-in. round Textolite case, with a hollow bronze exploring probe protruding from the back of the case. Scale, of the concentric type, covers 260 deg and is graduated directly in gausses.

The kit contains three standard gauss meters of different ratings, each with its own reference magnet. Further information on the new probe and kit is contained in bulletin GEC-238.

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Pin-Type Insulator

A NEW PINCO No. 1044 pin type insulator, designed to meet the needs of higher capacity distribution lines, has been announced by the Porcelain Insulator Corporation, Lima, N. Y.

The new design, featuring a tie wire groove with a radius of one-half inch, is reported applicable to installations calling for conductors up to and including 3/0 ACSR with rods. It is said to be profiled and contoured for ruggedness and to stay cleaner longer.

Specifications on the new No. 1044 include: dry flashover, 74 kv; wet flashover, 45 kv; leakage distance, 8 in.; dry arcing distance, 4-3/4 in.; wet arcing distance, 2 in.; mechanical strength, 3,000 lb. Both regular and no-corona (R) types follow the new design.

Galvanometer

A TYPE E galvanometer recently developed has its moving system, magnet, lamp, scale and lamp transformer in a single, compact case and can be plugged into a 115-v, 60 or 50-cycle outlet. It is produced by Leeds & Northrup Co, 4934 Stenton Ave, Philadelphia 44, Pa.

Manufacturer states: Available sensitivities are 0.5 microvolt, 0.005 and 0.0005 microampere per mm. Period is only about 3 sec. Scale has 50 1-mm divisions on either side of zero. Deflection is linear within 1%. Zero is adjusted by a knob on front of the instrument.

In addition to the high sensitivity, the instrument has, in effect, an added low sensitivity.

If a deflection shoots the galvanometer indicating light-spot off scale, a secondary spot appears. Moving only one-tenth as far as the main spot, this secondary spot shows direction of deflection and approximate magnitude of circuit-balancing adjustments.

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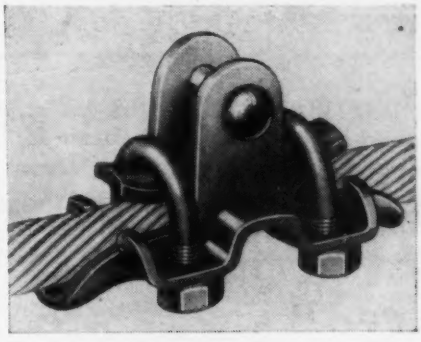
Reflector Lamps

Two 75-w hermetically sealed, internal reflector lamps, one a flood type and other a spot type, have been developed by Westinghouse Lamp Division, Bloomfield, N. J. The mushroom shaped R-30 bulb lamps are offered in 115, 120 and 125-v ratings.

Dimensions are $5\frac{3}{16}$ in. overall length and 3¾ in. nominal diameter. The lamps can be used in the home, office, store or factory. They supplement the 150 and 300-w, R-40 bulb reflector and spot lamps.



Suspension Clamps

PRESSED FORGED suspension clamps are being produced by the metal stamping method by Kerrigan Iron Works, Inc, 1033 Herman St, Nashville, Tenn. Specially developed equipment is used to insure uniform proportions and strength.

The standard line in aluminum is made from a 61 ST alloy with resistance to corrosion. A steel clamp is made from copper-bearing open-hearth steel plate (hot dip galvanized). They are reported to be non-magnetic, to provide a continuous unbroken seat for conductor, and are supplied with J-bolts or U-bolts, with socket connector, clevis link or plain.

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Crane Control

A NEW PRINCIPLE of crane control reported to eliminate mechanical load brake is announced by Harnischfeger Corp, 4400 West National Ave, Milwaukee 14, Wis. This new a-c crane control is designed to provide unusual hoisting smoothness and accuracy.

Called Magnetorque, the braking forces are exerted magnetically and govern the action of the hoist motor. It is stated that the hoist motor cannot be energized until the Magnetorque unit has been excited. Application to a-c crane control is made after five years of use with this type control on P&H excavators. The unit is reported to have no rotating electrical parts. Since braking forces are exerted magnetically, without friction and metal-to-metal contact, there is nothing to wear.

Magnetorque is also available with drum type or full magnetic control. It can also be furnished with all-position dynamic braking. Bulletin C-39 provides additional information.

ELECTRICAL BUSINESS OUTLOOK

INDUSTRIAL PRICES are on a see-saw as third round wage settlements draw closer. Unlike farm products, industrial commodities have shown no decline yet, are still 12% above a year ago. Token price reductions by some manufacturers won't reverse this trend unless labor cooperates.

The recent 5% reduction on certain items of electrical apparatus was made, with the warning that costs also had to stay down. Electrical workers were told that granting new wage demands might start another round of inflation.

Electrical manufacturers are keeping an eye on the steel industry. Steelmakers, suffering from a bad dose of Congressional publicity, might like to hold recently announced price reductions. Steel wages were fixed by a contract running until April, 1949, but union cooperation is still necessary for all-out production. Moreover, steel companies can't make any final decision on pricing until they know more about coal costs.

Coal troubles aren't over either. Miners seem now assured of the $100 a month pension, but the coal wage contract expires July 1. Just when the miners are free to strike is a complicated legal question. However, with stockpiles below normal, this industry will be under pressure for a quick settlement. That means higher cost coal for the steel producers. It also points up the necessity for fuel clauses in utility rate contracts.

Metal-working industries—like electrical machinery—will have a higher bill for labor and materials if steel and coal operators can't hold the lid down. The big question is how much. A cost increase of up to 5% might be absorbed by many companies with improving plant and labor efficiency. Consumers would probably have to pay for any greater rise.

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UTILITY USE of natural gas is shooting up. It was 34% above a year ago in the last quarter of '47 when coal use was up 21% and oil use down (EW Mar 6 '48 p 30).

Gas gains are due less to price—which has stayed cheap on long-term contracts while other fuel costs have soared—than to workings of power demand and gas supply. More gas is used, where it can be had, when power demand jumps but output from water sources remains fixed. Bigger gains would require new lines—still held up by steel shortages.

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CORPORATE PROFITS have a new importance. One company after another is buying newspaper space to tell the public why it needs high earnings.

The reason is one familiar to utility men—heavy investments in new facilities. Last year U. S. corporations paid for two-thirds of their investment in new plant and equipment out of retained profits. Most of their '48 net income will go the same way. If profits fell off, so would capital expenditures.

Electric power companies have been lagging in the profit parade. In 1947 they made only about a fourth more than in 1939. Manufacturing industries showed gains for the same period ranging from 60% to 287%, according to a survey completed by the Federal Reserve Board.

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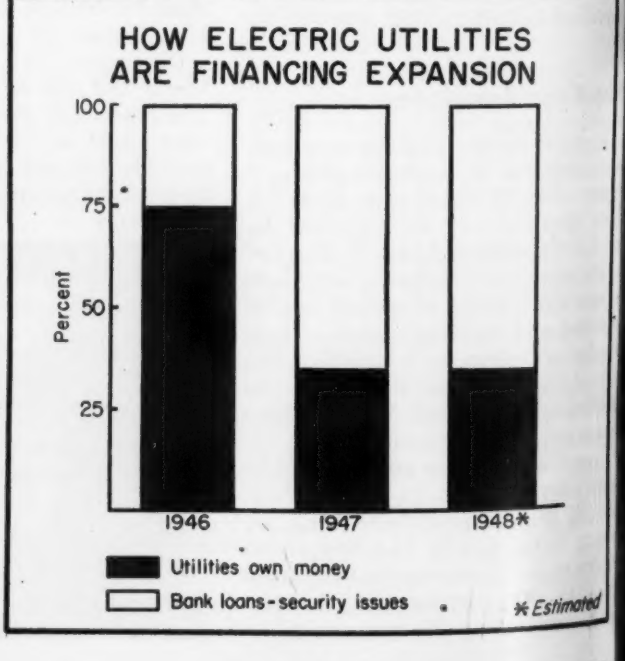
UTILITY FINANCING plans have to be made differently because profits haven't soared. For manufacturing corporations, 1947 retained profits and depreciation more than equalled the amount spent on plant and equipment. But for utilities only about one-third of new plant investment was covered by the same items. Bank loans and security issues therefore rose to two-thirds of capital outlays; they were only one-fourth in 1946.

Unless rate increases exceed expectations, power companies won't be able to pay for any larger share of their '48 capital expenditures from their own pockets. They will continue to depend on the security markets. Since bond issues have already swollen debt ratios, the industry has a special stake in a revival of interest in new common stocks.